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RAILWAY AGE

The Railroads and the "American System"

We are hearing much these days, especially from spokesmen of Big Business, about preserving the "American system." This system, and all who profess to believe in it, are being subjected right now to a conclusive test. It is being supplied by the railway situation. And, paradoxical as it may seem, proposed measures to apply the principles of the "American system" to the railroad problem are receiving the most lukewarm support or the strongest opposition from business interests that are among the loudest in demanding "preservation of the American system."

In consequence, there are wide differences between different groups advocating transportation legislation, and prospects of legislation that will contribute substantially toward solution of the railroad problem are not good. The principal legislation advocated by President Roosevelt's "Committee-of-Six" would equalize the regulation of railways and other carriers and withdraw subsidies from the latter. Such legislation, which would simply establish "equal rights for all, special privileges for none," and be strictly in accordance with the "American system," is essential to solution of the railroad problem, regardless of what other legislation may or may not be passed. Despairing of withdrawal of subsidies from carriers by highway, waterway and airway, the Railway Business Association is advocating subsidies also for the railways. The Transportation Conference sponsored by the Chamber of Commerce of the United States in its recommendations has completely ignored the transportation competitive situation.

What is the "American System"?

It has thus, in effect, put the Big Business interests it represents on record in favor of continuing present government policies that greatly aid other carriers in competing with the railways.

The words "American system" formerly meant a

combination of (1) republican government and (2) private enterprise under which (3) government interfered with any business only as much as was demonstrably necessary to protect *the public interest*. Virtually all those advocating preservation—or restoration—of the "American system" would accept this definition of it now. But do all of them oppose every form of government interference with *the railroads* that is not demonstrably necessary to *protect the public interest*? And, if not, what does that prove as to their intelligence or sincerity?

There are easily possible changes in government policies that would remedy the present transportation situation in the public interest and save the railways from government ownership. Will our republican institutions so function, then, as to cause these needed changes in government policies? Their failure to do so will mean that the "American system" could not stand the test to which it is being subjected by our railroad problem. That problem for thirty years has been subjecting the "American system" to its first really severe *economic* test. If it cannot stand its *first* severe economic test, why expect or hope that it will stand others? If private enterprise in railroading cannot be made safe under our form of government, why assume that any other kind of private enterprise can be safe under it?

Objectives of Transportation Legislation

The ultimate and most important objective of all working on the transportation problem who really desire to maintain—or restore—the "American system" is the preservation of private ownership of railways. For reasons given in these columns many times, it is essential to attainment of this objective that there shall be a large and sustained increase in the net earnings of the railroad industry. Their next most important objective should be *reduction and limitation of the total*

cost of all commercial transportation borne by the public to the lowest level consistent with good service.

Apparently it should be easily possible to get all real believers in the "American system" to agree upon and support the policies necessary to the attainment of these two objectives. But while they all heartily give lip service to the two objectives, their differences regarding the government transportation policies that should be adopted show that many of them either are woefully ignorant regarding the economics of transportation or do not believe enough in the "American system" to make whatever temporary or lasting efforts or sacrifices may be necessary to get transportation included in that system.

Big Business Versus the "American System"

As a matter of fact, many business interests that are now energetically and loudly participating in propaganda against the New Deal for undermining the "American system" have been themselves for many years engaged in undermining it by promoting the adoption of government policies tending to destroy private management of railways and the earning capacity and credit of the railroad industry.

Our railroads always have been a private enterprise, and most advocates of the "American system" claim to want them kept such. But many of them are unwilling to have every form of government interference with the railroads determined solely by the test of what is demonstrably necessary to protect *the public interest*; and usually the bigger the business they represent the less willing they are to accept this test. Why? Because numerous branches of Big Business largely owe their bigness to government policies discriminating against the railroads in favor of other carriers and other kinds of business; and the unfair advantages that these branches of Big Business consequently enjoy at the expense of the railroads and little business are much more precious to them than the "American system" and the public interest. Hence the differences between different interests concerning the federal and state legislation regarding transportation that should be adopted and the danger that there will not be any that will contribute materially toward a solution of the railroad problem.

Genesis of the Railroad Problem

We hear much about the present "transportation problem," but it is essentially a *railroad problem*. The railroads still carry two-thirds of the country's commerce. It is the railroads that are bankrupt. It is the railroads that are in danger of government ownership. It is the railroads, not other carriers, whose ownership and management by the government would greatly damage, if not actually destroy, the "American system." Therefore, whatever is done to help solve the railroad

problem will help solve the "transportation" problem, while all the time and energy devoted to the "transportation problem" that does not help solve the railroad problem will be wasted. There are too many working in their own political or business self-interest on the "transportation" problem, and not enough working in the public interest on the railroad problem.

The railroad problem in its present form and acuteness is only partly the creation of recent years. Its creation began with the passage of the Mann-Elkins Act in 1910 giving the Interstate Commerce Commission control over the initiative of railway management in fixing rates. That was fifteen years before the government-subsidized competition of other carriers began to become dangerously effective. And it did one thing the importance of which has never been emphasized enough—it divided the responsibility for railway management, and, therefore, for railway results. For the fixing of prices or rates in any business or industry is one of the most vitally important functions of management, and no so-called "management" that has been largely or entirely deprived of it can be fairly or intelligently held entirely responsible for results. And long before the government-subsidized competition of other carriers became so effective the railways were suffering more and more from the division of authority which prevented their managements from readjusting their rates concurrently with changes in their costs. Furthermore, the principal means used in all business in meeting competition is price-making, and obviously the more outside competition increased the more freedom railway management should have been given to so fix rates as to maintain railway traffic and earning capacity.

Big Business Versus the Railroads

But all efforts to get the Interstate Commerce Commission to let the railways have rates that would yield a "fair return" were opposed and defeated throughout the twenty years from 1910, when the Mann-Elkins Act was passed, to the beginning of the depression. And, while competing carriers have been free to make rates as they have seen fit, all efforts of railway management, since competition of other carriers increased, to secure relaxation of the railway rate regulating policy of either the Interstate Commerce Act or the Interstate Commerce Commission have thus far been opposed and beaten. And who thirty years ago got passed legislation transferring from railway management to the Commission the power to fix rates? And who, year after year, long before the New Deal began attacking business profits, influenced the Commission to so fix rates as to prevent the railways from earning fair profits? And who has prevented legislation relaxing railway regulation enough to enable railway management to fix rates in accordance with changed competitive conditions, as would be done in any unregulated business?

The shackles were put on and have been kept on railway management, and railway profits have been first curtailed and since almost wiped out, largely by the efforts and influence of business interests now purportedly resisting efforts of the New Deal to undermine and destroy the "American system of free private enterprise" and substitute a system to be operated "for service and not for profit."

Government Policies that Increase Transportation Cost

Every form or degree of government discrimination in the regulation or subsidization of different carriers influences traffic to move by the governmentally-favored carriers, even though total costs of transportation by them—including those paid in taxes—are higher than by other carriers. Government policies diverting commercial traffic from low-cost to high-cost carriers, and thereby tending to destroy the former and expand the latter, constitute the most palpable violation possible of the principle that government should interfere with business only as is demonstrably necessary to protect the public interest.

And yet many persons who loudly denounce attacks on the "American system" oppose changing such policies. Do they not realize their inconsistency? Or are they just naturally hypocrites and racketeers? The correct answer to these questions is no doubt supplied by the fact that the strongest opposition to federal and state legislation to equalize the regulation and subsidization of railways and other carriers almost invariably comes from representatives of Big Business that are demonstrably benefiting largely from these policies at the expense of the farmers, of little business and of the railways.

God help the "American system" if it must depend largely for its defense upon such "friends." Avowed advocates of government railway ownership or communism are much less dangerous to it.

The "Mistakes" of Railway Management

There is a vast deal of hokum being talked by people with axes to grind regarding the causes of the present railway situation. It is often attributed to mistakes or sins of railway management, financial or otherwise. There have been many such mistakes and sins—according to our observation, about as many in the railway industry in proportion to its size as in other industries. The railways have been manned by human beings, and, shameful as it may seem, they have acted very much like the selfish and otherwise admirable or despicable human beings who now criticise them.

But the condition of the railway industry is not so much worse than that of any other large industry because of mistakes and sins of its management. Its condition is so much worse because, in addition to mistakes

and sins of management, it has been victimized more, and is still being victimized more, than any other industry by governmental policies violating in almost every conceivable way the principle of the true "American system" that government should interfere with business only as is demonstrably necessary to protect the public interest. It could have stood in the past, and could stand in future, as well as any other industry the mistakes and sins that always have been, and perhaps always will be, committed in the management of every large business or industry. It could not stand in the past, and it cannot stand in future, *in addition* government policies promoted, adopted and maintained to help not only its employees and its customers, but *even also its competitors*, and which disregard every right of the investor in railroads, every consideration of public interest, and therefore every principle of the "American system."

Transportation Conference on Government Ownership

The "Transportation Conference" has refused to advocate, even in the most general terms, the equalization of the government regulation and subsidization of all carriers, because it has been dominated by Big Business interests that are benefiting by most of the government-created rackets that are being practiced in transportation at the expense of the railways and the general public. But it adopted a demand that Congress make a declaration in favor of private ownership of railways. As we understand the conference, if Congress will only declare against government ownership it will be all right with the Conference for Congress to do whatever will tend to destroy private ownership. And, believe it or not, that indicates the attitude toward the railroad problem of most of our business leaders in the fight to save the "American system." They don't want government ownership of railways. But they don't want any changes in present government policies tending to cause it!

A Gem of Economic Analysis by the Great Automotive Industry

Motor trucks operating over the country's highways are paying special motor vehicle taxes of well over one million dollars a day.

This daily contribution to the maintenance and building of the country's road system is more than one-fourth again as much as the total taxes for all purposes paid by all the Class I railroads in the United States, which account for 90 per cent of the rail trackage in the country.

The Class I railroad taxes for the year 1937, according to the Association of American Railroads, totalled \$329,400,954, including property, payroll and income levies. The special truck levies were 26.74 per cent higher.

From "Automobile Facts"
Published by the Automobile Mfrs. Assn.



Ties—On Their Way to the Treating Cylinders

Wood Preservers Meet in Washington

Treatment of timber for railway service receives major attention at well attended meeting

MORE than 325 railway and other men interested in the treatment of timber gathered at Washington, D. C., on January 24-26 for the thirty-fifth annual convention of the American Wood-Preservers' Association. At this meeting primary consideration was given to (a) the perfection of the processes and the refinement of specifications for the treatment of cross ties, bridge timbers, piling, poles and other timber and (b) to the service rendered by such timbers in tracks, bridges, pole lines and other structures.

Of special interest were addresses by W. H. Bettis, maintenance engineer, Norfolk & Western, on The Experience of the Norfolk & Western with Treated Timber and by P. Petri, chief engineer maintenance, Baltimore & Ohio System, on What the Baltimore and Ohio Has Learned from the Treatment of Timber Other Than Cross and Switch Ties. J. B. Akers, assistant chief engineer, Southern Railway System, welcomed the convention to Washington on behalf of the railways and other wood-using industries. A dinner session on Tuesday evening featured the use of treated timber in government structures with addresses by F. A. Silcox, chief, United States Forest Service; W. E. Reynolds, assistant director, Procurement Division, United States Treasury; Ben Moreell, rear admiral, United States Navy; T. H. MacDonald, chief, Bureau of Public Roads; and John Carmody, administrator, Rural Electrification Administration. B. M. Winegar, Canada Creosoting Company, Montreal, Que., presided over the convention as president.

At the closing session on Thursday forenoon, C. S. Burt, superintendent Ties and Treatment, I. C., Grenada, Miss., was elected president; Ralph E. Meyers, sales manager, International Creosoting & Construction Co., Galveston, Texas, first vice-president; W. R. Goodwin, engineer wood preservation, M. St. P. & S. S. M., second vice-president; and H. L. Dawson, Washington, D. C., was reelected treasurer. W. J. Burton, assistant chief engineer, M. P., and W. P. Conyers, Jr., vice-president and treasurer, Taylor-Colquitt Co., Spartanburg, S. C., were elected directors. At a meeting of the executive committee following the convention, M. F.

Jaeger, superintendent of the Port Reading Creosoting Plant of the C. R. R. of N. J.—Reading railways—was reappointed to the executive committee to fill the vacancy created by the election of Mr. Goodwin as vice-president. St. Louis, Mo., was selected as the 1940 convention city.

Shortly after calling the convention to order, President Winegar reviewed the activities of the Association. "In the century of wood preservation that has passed," he said, "we in America have written our own history, have proved the value of treated wood by experience, research and development. The test tracks of the railways, and other carefully kept records of performance, have provided data which are invaluable in demonstrating the merit of treated wood. Most of the credit for the advancement in our knowledge of timber preservation must be given to the railways which, in their development of transportation, realized far in advance of other large users of timber what economies were to be expected. It is fair to state that their expectations have been greatly exceeded and their investments in treated materials for cross ties, bridges, culverts, etc., have resulted in maintenance far lower than they anticipated. As a result, railway tracks installed on treated ties span the North American continent.

"In view of the leadership attaching to our Association," he continued, "our membership should continue to accept responsibility for producing only what is best. We cannot permit inferior work, nor can we accept the responsibility of sponsoring or promoting insufficiently tested treating agents or untried methods. The work done by our membership should be the hall-mark of treated timber."

In concluding his review, Mr. Winegar referred to the fact that we are passing through days of rapid change and uncertainty. "It is especially important," he said, "that measures be adopted which will contribute to a period of normal stability to the railways. This is of basic importance to the wood preserving industry because the railways have always comprised and still comprise the largest customers of the wood preserving industry."

The Association continued working actively during the year on the revision of its specifications for the

treatment of various timbers for different purposes to eliminate inconsistencies between specifications already adopted and bring them into the same general form and terminology. Revised specifications were adopted covering the treatment of Southern Pine piles and posts by pressure processes, while progress was reported in the revision of specifications for the treatment of Douglas Fir, of oak ties and lumber, and of poles by pressure processes and also for the non-pressure treatment of poles. Progress was also reported in the revision of the Association's standards for the Purchase, and Preservation of Treatable Timber.

One of the activities to which this Association has long given detailed attention is the compilation and presentation of service records of treated timber. This year extensive reports were presented on cross ties, poles and posts. In the report on cross ties, the renewals per mile were presented by individual years and for five-year averages for twenty-seven roads for periods up to twenty-seven years. These figures were supplemented by detailed records of inspection of test tracks on the A. T. & S. F.; the B. & O.; the C. & N. W.; the C. B. & Q.; the C. M. St. P. & P.; the U. P.; and the S. P.

The committee on Service Records of Poles presented similar records of the life of poles installed by the A. T. & S. F., the N. Y. N. H. & H. and several public utilities. It also presented specific suggestions for the manner of inspecting poles in service to determine their condition. The committee on Post Service Records presented similar data on the life of treated posts in railway and highway fences in various parts of the country, together with

detailed suggestions designed to eliminate abuse to posts after treatment.

In a paper dealing with Marine Structures on the North Atlantic Seaboard, Ralph H. Mann, engineer, A. W. P. A. Service Bureau, referred to a number of railway structures in which creosoted timber is giving outstanding service. Among others, the Pennsylvania placed creosoted pine piles in its ferry racks at Exchange Place, Jersey City, N. J., 17 years ago, which piles are reported to be in excellent condition today, in spite of the severe service to which such structures are subjected. Mr. Mann also referred to pressure-creosoted pine piles which the Central Railroad of New Jersey installed in its marine terminal pier at Atlantic Highlands, N. J., in 1892 and stated that when this pier was redecked in 1934, the supporting piles were uncovered, and it was found that none required replacement. These creosoted piles are reported to be in good condition today after 47 years' service.

Recognizing the increasing trend toward the use of creosote-petroleum mixtures, especially for the treatment of cross ties, the committee on Preservatives has reviewed the practice of individual railways and last year presented a tentative specification for petroleum for blending with creosote. This specification was adopted formally at the convention this year. This committee reported also, in response to another instruction, that it believed it to be impractical to prepare a specification for creosote-petroleum mixtures further than to stipulate that the creosote and the petroleum should each conform to the A. W. P. A. specifications.

Treatment and Pre-framing On the B. & O.

By P. Petrie*

The use of treated timber on the Baltimore & Ohio was not started on a large scale until 1924 and did not become general until 1925. Since that time, practically all timber and piling used in bridges and trestles (except for purely temporary use), and most of the structural timber in docks and piers has been treated. A considerable amount of treated timber has also been used in buildings, but this has been for special purposes or to meet local conditions.

The decision by the Baltimore & Ohio to treat structural timber was based upon the favorable results obtained by others and upon our own experience in the extensive use of treated cross and switch ties. It was also realized that, to obtain maximum benefit from treatment, it would be necessary to preframe the timber, as far as practicable, and our progress in the treatment of timber has been attended by a parallel and concurrent development in methods for pre-framing work.

Our use of structural treated timber has been on a sufficiently large scale for a period of 14 years to enable us to draw some definite conclusions as to its merits. We can not, of course, determine as yet the ultimate average life of such timber, but we can safely state that we have obtained a sufficient increase in life over that of untreated timber to have already justified the cost involved. In addition, we have improved our methods of framing, and have developed a greater variety of uses for treated timber, also the utilization of lower grades of timber.

Prior to 1924, our use of timber for bridge and dock work was confined generally to three kinds of wood, namely, fir, white oak and long leaf pine, and while the bulk of our requirements for such uses is still in these woods, we are now using red oak, as well as white, a

lower grade of long leaf pine and a considerable quantity of short leaf pine, the latter principally for guard timbers, joists, walkways and platforms. This has brought about a large saving in initial cost, and in our opinion has been done without any sacrifice in life or structural design.

Closely associated with the treatment of structural timbers is our practice of framing before treatment, or pre-framing as it is generally expressed. It is becoming increasingly evident that although the life of timber is greatly prolonged by treatment, still longer life can be obtained by reducing the amount of framing in the field to a minimum. Such evidence of decay as we have observed in treated timber has almost invariably originated in surfaces on which the treated wood has been removed by framing. In fact we do not know of any case where decay originated on or under an undisturbed treated surface. Therefore, pre-framing is an important adjunct of treatment.

When we started structural timber treatment on an extensive scale in 1925, and for several years thereafter, our production varied from 8,000,000 to 9,000,000 ft. b. m., per annum, of which approximately 50 per cent passed through the framing mill. This timber, which received at least some degree of pre-framing, consisted principally of bridge ties; guard timber and walkway joists which were completely framed; trestle stringers and caps, which were sized and cut to length; and miscellaneous trestle timber, which was merely cut to length. Further study of both field and mill practices and refinements in methods of obtaining necessary field measurements have now enabled us to increase greatly the extent of pre-framing in the mill, so that at the present time approximately two-thirds of our total treated production passes through the mill.

We are now in a position not only to pre-frame com-

* Chief Engineer Maintenance, Baltimore & Ohio.

pletely all bridge deck material, but also all trestle material with the exception of longitudinal bracing for which boring is omitted to permit greater latitude in field erection. For spot renewals of such members as stringers and posts, boring is also usually omitted. We are also now in a position to do a large amount of pre-framing of timber for miscellaneous uses and have completely pre-framed the timber for four large transfer bridges, all members of which were fully cut and bored and all chord members completely assembled before treatment. These structures involved about 75,000 ft. b. m. of timber each, and the work done at the mill, including all framing and partial assembly, was done at a cost of \$15 per M. This performance compares with a field cost of \$35 to \$40 per M. for similar work formerly done at the bridge sites.

As an indication of the development in the character of framing handled, attention is drawn to the following comparison. The total mill output for 1927 amounted to 5,138,295 ft. b. m., of which approximately 50 per cent consisted of bridge deck material, 40 per cent stringers and caps, and slightly over ten per cent miscellaneous framing. For the year 1927, the total mill output was 3,695,592 ft. b. m. Of this 1,501,146 ft. b. m. represented bridge deck material, 446,446 ft. b. m. stringers and caps, and 1,748,000 ft. b. m. miscellaneous framing. It is to be observed that with the more diversified use of the mill there was a decrease of about one-third in total output in this 10-year period.

This decrease in total output was due primarily to the benefits being derived from the longer life of treated timber rather than on account of curtailment of maintenance renewals.

It has previously been mentioned that we are now using treated timber to some extent in buildings. Such use is generally confined to foundation material, but we have placed treated material in such structures as engine houses, principally for roof framing and sheathing, also for pit timbers and jacking plank. In addition we have used a large amount of treated timber in crib and bulkhead walls. Both second-hand and new timber have been so used and in several instances, by careful design, we have completely pre-cut and bored such crib members.

One of the major developments in our treating practice has been the change in kind of treatment of bridge ties and other deck material for open deck steel bridges. To minimize the fire hazard on such bridges, we changed, in 1933, from creosote treatment of timber for this use to treatment with Wolman salts. Owing to the comparatively short period that this preservative has been used, we are not yet in position to determine its comparative merits as a preservative, but it undoubtedly has a fire resistant value and on that account we have also used it in building work, such as the engine house roofs previously referred to.

Among the minor developments in our treatment procedure may be mentioned the use of anti-splitting devices, particularly for oak bridge ties and timber. Owing to conditions that have existed for several years, it has been impracticable, in many instances, to obtain the desired amount of seasoning for our timber, and the necessity for its treatment while still fairly green has in some instances resulted in excessive splitting and checking of the timber after treatment. On account of the character of the Wolman salts treatment, this condition has been intensified.

As a result we have now adopted a policy of placing drive dowels in all oak ties during the framing process and using similar dowels in other timber when conditions indicate this to be desirable. The added cost of this

change is quite small, averaging about three to four cents per dowel.

In conclusion, during the 14-year period in which we have been using treated timber for structural purposes on an extensive scale, we have treated and used approximately 90,000,000 ft. b. m. of timber, of which over 49,000,000 ft. b. m. was pre-framed. We are convinced that the timber so treated has a life expectancy much in excess of that of untreated material. We know that pre-framing at a central point, which was developed as a corollary of treatment, has produced direct savings of many thousands of dollars annually. The fact that our average cost of mill work, including all overhead and indirect charges, has been only \$5.28 per M. ft. b. m., is proof of this statement.

Treated Timber on the N. & W.

By W. H. Bettis*

The first treated timber used by the Norfolk & Western consisted of piling and lumber for foundations for bridges in Norfolk, Virginia, in 1886, and for coal piers in 1890. The use of treated material was confined to work along the seaboard for many years but because of the rapid rise in the cost of labor and materials, beginning in 1917, it became necessary to give consideration to the treatment of crossties, switch timber and bridge lumber in order to extend the life of these materials.

The average life of untreated white oak crossties and switch timber at this time was about 7½ or 8 years in main line tracks. Untreated white oak bridge ties averaged about 8 years' life. Untreated pine stringers and caps averaged about 12 years' life, while posts and bracing averaged about 20 years' life. In the years preceding the World War the railway maintained a large number of timber bridges on branch lines and the cost of maintenance of these bridges was steadily increasing, owing to the advancing costs of material and labor and the demand for stronger structures to take care of the increasing weight of equipment and increasing traffic.

In 1920 we started the construction of a modern timber preserving plant at Radford, Va. This plant was completed in the following year, at a cost of over one million dollars, including property and grading. It occupies about 124 acres of land and has approximately 13½ miles of tracks. The plant has two retorts, each 140 ft. long and 7 ft. in diameter. It is equipped with a tie adzing and boring machine and a framing mill for framing bridge ties and structural timbers.

Actual treating of material began in September, 1921, and from that date to the end of 1938 the following material has been treated:

Crossties—white and mixed oak	14,697,494 pieces
Bridge ties—white and mixed oak	5,096,735 ft. b. m.
Switch timber—white and mixed oak	45,238,082 ft. b. m.
Pine lumber	38,648,328 ft. b. m.
Oak lumber	455,089 ft. b. m.
Land piling	265,408 lin. ft.
Marine piling	802,840 lin. ft.
Transmission poles	1,605,029 lin. ft.
Pine pole stubs	72,872 lin. ft.
Cross-arms	1,736,958 ft. b. m.
Tie plugs	58,650,000 pieces
Miscellaneous material	2,000,000 cu. ft.

All of this material, except marine lumber and marine piling, was treated by the Rueping or empty-cell process. Marine lumber and marine piling were treated by the Bethel process.

From 1921 to the middle of 1932 we used straight No. 1 creosote oil. We then used, for about 1 year, a mixture consisting of 80 per cent creosote and 20 per cent coal tar but we found that there was little difference in

* Maintenance Engineer, Norfolk & Western

the cost of the creosote-coal tar solution as compared with straight creosote oil and we went back to the use of straight creosote oil. We are now beginning to use a mixture of 80 per cent creosote, 20 per cent petroleum.

At the time our plant was constructed we required about 1,600,000 crossties and about 5,000,000 ft. b. m. of switch timber annually; at the present time we require about 200,000 crossties and about 500,000 ft. b. m. of switch timber. This large reduction has been accomplished through the general use of treated timber. Our records indicate that we have not removed more than 10 per cent of the first treated ties installed in 1921 and 1922.

According to the Goltra yard-stick, this indicates an average life of 30 years. We do not, however, expect an average life of more than 20 years and perhaps less than 20 years from ties placed in heavy traffic tracks on curves for the re-gaging which is necessary, from time to time, causes the ties to become spike-cut, and, regardless of the use of treated tie plugs, finally leads to decay in the tie plate seats and materially shortens the life of the ties. We find that the use of improperly placed anti-checking irons will likewise shorten the life of ties. It is also our practice, when treated ties are adzed in the field, to require the application of one or more coats of hot creosote oil to the scored surface.

From 1920 to 1929 we used 7-in. by 11-in. tie plates which were not lagged to the tie but after a few years service in heavy traffic tracks we found that these plates were becoming imbedded in the ties, due to mechanical wear and insufficient area of bearing, causing injury to the ties and making excessive adzing necessary when the plates were renewed. In 1929 we adopted a larger tie plate, 8-in. by 13½-in., lagged to the ties and expect a greater average life from the treated ties installed since its adoption.

The average annual renewal of crossties for the ten-year period from 1916 to 1925 was 1,482,200 or 353 ties per mile of track. The average annual renewal of crossties for the ten-year period from 1929 to 1938 was 482,896, or 104 ties per mile of track. In 1938 we required only 137,545 ties for renewals, or about 31 ties per mile of track. On this basis the average annual savings effected by the use of treated crossties during the past ten years has been nearly \$1,000,000. Nearly all of the ties now in tracks of our railway are treated.

We are now pre-framing and treating our bridge ties and expect to increase their life greatly thereby. The treating of pine and oak bridge lumber will, we think, at least double its service life, with the possible exception of posts and bracing. We have been treating our poles used in transmission lines since 1927 and indications are that we will get an average of 20 years or more service life from them.

Untreated second-hand timber released from aban-

doned structures, or from structures requiring major repairs, is shipped to the treating plant, where it is cut back to sound wood and then treated and placed in stock for re-use. Much of this material is used for cribbing, temporary track supports, curbing for station platforms and other purposes. Treated ties released from abandoned branch lines are used in yard tracks and light traffic branch lines. Released untreated bridge ties, if usable, are treated and later used for blocking and cribbing.

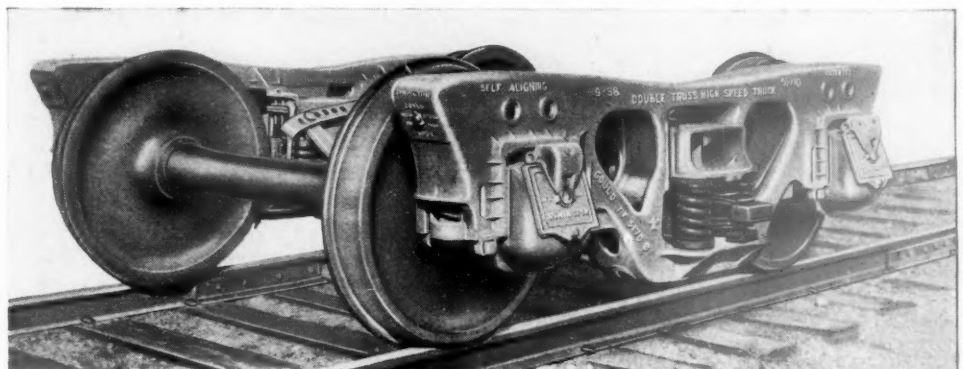
Modified Freight Truck For High-Speed Service

FOR more than three years the Symington-Gould Corporation, Rochester, N. Y., has been studying the design of a truck for intermediate freight service which would approximate the riding performance of passenger type trucks but with a relatively slight increase in weight and cost over that of the present integral-box freight truck. This study has involved a long series of road tests under the company's instrumented test cars, which were used some years ago by a subcommittee of the A. A. R. Car Construction Committee in its study of the comparative riding qualities of various types of non-harmonic bolster spring groups.

The company is now offering a high-speed truck capable of safe operation at speeds up to at least 90 m. p. h. which is basically a development from and a refinement of the double-truss spring-plankless self-aligning integral box truck now in service under or on order for about 50,000 cars. The column and bolster end construction is of the characteristic self-aligning design which permits the temporary lead of one side frame over the other on entering curves and a prompt restoration to normal on leaving, without loss of bearing area, and therefore with a reduced rate of wear of column faces and bolsters. The bolster used is identical with that for the spring-plankless self-aligning integral-box truck. The bolster spring group may be of the Coil-Elliptic type or any combination of coils with an efficient snubber.

To obtain the necessary further improvement in riding quality and safety, through prompter equalization of wheel loads at speeds in excess of 60 m. p. h., and to protect the side frames against direct rail shocks, separate boxes are used, each supporting one end of the side frame on a parallel spring group consisting of one semi-elliptic spring mounted on the box roof and two helical coil springs mounted on journal-box side brackets. This group has a total travel of 1½ in., thereby doubling the total spring travel between rail and center plate with a sevenfold improvement in riding quality over that

Symington-Gould Double-Truss High-Speed Truck



of the integral-box truck with non-harmonic spring groups, as determined by the A. A. R. method of test. The semi-elliptic springs are completely enclosed within the side-frame ends except for inspection holes and the normal open space within the side frame compression and tension members, but all these openings can be closed when specified for more complete protection of the semi-elliptic springs. These springs are entered and removed through the open ends of the side frames, and gasketed covers keep these end openings dust- and water-tight in service.

The side-frame pedestal jaws and the journal-box pedestal ways are contoured as segments of concentric circles, carefully gaged to limits of close clearance. The journal box is, therefore, capable of the same partially rotative

signed to angle with the axle and such angling as pedestal clearance might permit is not sufficient to protect the bearing against damage from lateral axle thrust.

In the truck herein described proper relative alignment of the two side frames is maintained by means of a pin-connected transverse bottom tie. The side frames may be used without change with a two-piece lateral-motion bolster consisting of a transom bolster supported in the usual manner on the spring groups, and a floating short bolster resting on suitable contoured and geared rockers seated in pockets in the transom bolster. The frames can also be furnished for use with clasp brakes when specified.

Standard equipment for this truck includes constant-contact, resilient and non-harmonic side bearings, as the road tests mentioned herein have proved the desirability of bearings of this type to prevent synchronous car-body roll, truck nosing and undue lateral oscillation. The first is unavoidable at high speeds with side bearings maintaining the usual clearance. With the type recommended the car body is constantly stabilized but with sufficient resilient yield of the truck bearings to meet all track conditions without danger of derailment.



The Ball-Joint Journal Box and Parallel Spring Group

movement between the pedestal jaws as is the bolster end within the columns, thereby making the truck self-aligning throughout and providing the same design essential of full bearing area as is present in the self-aligning column and bolster construction. The pedestal jaws, pedestal ways, column faces and bolster ends may be equipped with hardened liners when specified.

The partial rotation of the journal boxes in response to angular movement of the axles is facilitated by the rocker end mounting of the helical springs, the upper and lower spring caps being contoured to permit an easy rocking motion with minimum frictional resistance to angling and to assist in restoration of the boxes to normal position.

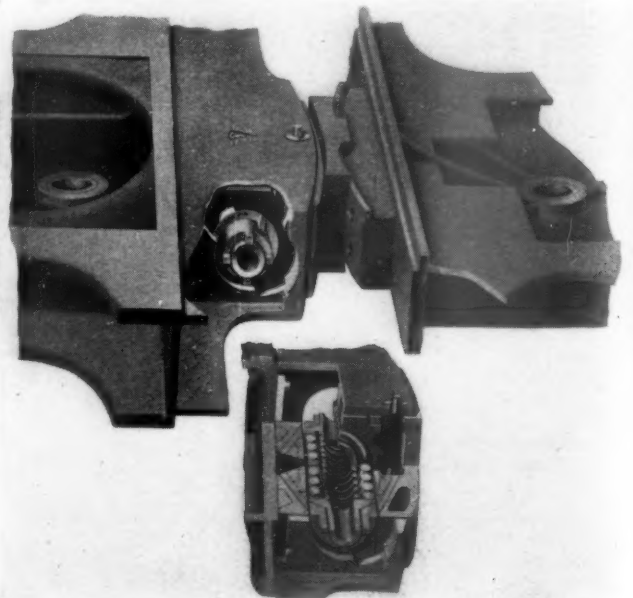
The usual internal box clearances are maintained and (in the absence of lateral axle shock) these permit a limited amount of angling of axle, bearing and wedge without box rotation, but under these conditions only one journal-bearing side lug and one corner of the wedge can be in contact with their respective stops within the journal box. Under simultaneous lateral axle movement, the self-aligning journal box immediately rotates so that both journal-bearing side lugs or both front corners of the wedge are brought into contact with the internal stops, thereby avoiding any battering or breakage of the side lugs, any non-cylindrical wear of the journal-bearing lining, or any lift of the bearing to invite waste grabs. The usual flat-side pedestal-type box is not de-

Reduction of Locomotive Vibration

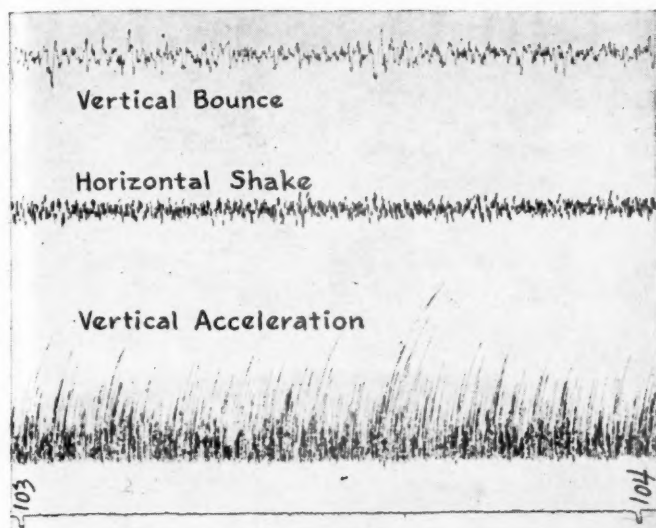
IT is a well-known fact that a great amount of so-called hard riding of locomotives has been due, first, to inability entirely to eliminate slack or lost motion between engine and tender and, second, to inability to dampen the horizontal unbalanced forces of the reciprocating masses. Heretofore, the mechanism used between engine and tender has been the wedge type radial buffer, or the spring buffer types, the inadequacy of which became pronounced with the advent of higher speeds.

Some years ago the Franklin Railway Supply Company developed and has since placed in service on many locomotives the E-2 radial buffer,* an automatic mechan-

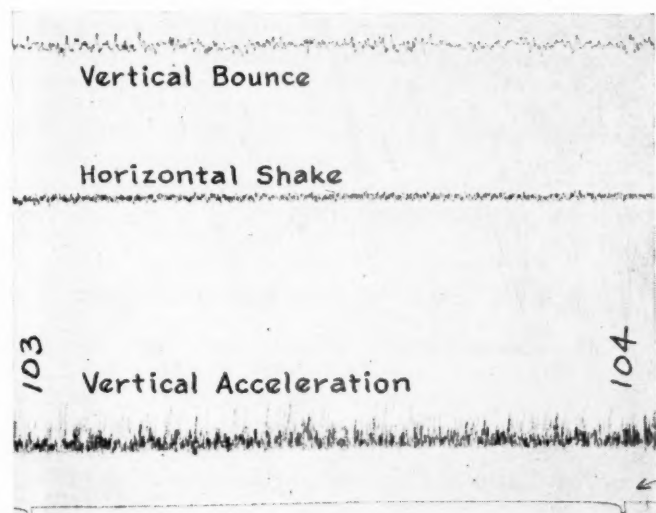
* For a complete description of the E-2 buffer see the *Railway Age* for March 24, 1934, page 437.



The E-2 Type Radial Buffer



A-1 Wedge Type Buffer—54.5 M. P. H., November 21, 1938



E-2 Type Radial Buffer—54.6 M. P. H., November 23, 1938. (Same Locomotive as Above)

Sections from Shock and Vibration Recorder Tapes Showing the Effect of the Spring-Actuated Friction-Type Radial Buffer in Steadying the Riding of the Locomotive

ism embodying two principles: first, the entire elimination of slack between engine and tender; second, the utilization of spring-actuated friction members which provide high resistance to the forces of compression between engine and tender. The utilization of these principles makes possible a design of buffer that enables the tender to become practically an integral part of the locomotive. The E-2 buffer still retains adequate provisions for radial action and disalignment caused by curving, turnouts, and track irregularities. Application of the improved design of buffer has resulted not only in greatly improved riding qualities of the locomotive, but has also brought about a very material reduction in maintenance costs that result from such factors as loose cabs, broken piping, displaced arch bricks, worn drawbars, drawbar pins and chafing plates.

Recently some comparative tests between the old and new type buffers were made in passenger service on a western railroad. These tests were made with a shock and vibration recorder. This type of instrument, illustrated in the photograph, is well recognized as an apparatus for securing accurate data in connection with the riding qualities of rolling stock. As a part of its develop-

ment it was tested for accuracy on the shake tables at Purdue University. On the road tests this shock and recording instrument was secured to the deck of the locomotive below the engineer's seat box.

The comparative tests were made with the same locomotive, a 4-8-2 type with 74-in. driving wheels. The tests were conducted with the same number of passenger cars, over the same track, and on the same operating schedule. No work was done upon the locomotive between tests other than the change of buffers. Track conditions were exceptionally fine.

The first test was conducted with the locomotive equipped with the old-style wedge buffer which was in excellent working condition and properly adjusted. Two days later the comparative test was run with the E-2 buffer.

The chart contains reproductions of comparative and representative portions of the records made by the automatic recorder between mile posts 103 and 104. The upper half of the illustration shows the performance with the old-style buffer. The lower half shows the performance with the E-2 buffer and clearly indicates the benefits obtained. The speeds over this section of track were practically identical.

These comparative graphical records show the improvement that can be made in the riding qualities of a locomotive with the E-2 buffer, particularly in smoothing out or damping the effect of the unbalanced forces of the reciprocating masses.

The vertical displacement of the upper line, marked "Vertical Bounce," is equal to one-third of the actual vertical movement of the locomotive on the chart from the instrument.[†] With the old buffer a maximum vertical displacement of 0.45 in. is shown as compared with a maximum of 0.25 in. on the chart of the test with the new buffer. This is a reduction of 50 per cent in favor of the new buffer.

The vertical displacement of the second line on the chart[†] measures approximately one-half of the actual

[†] The illustration in this article is two-thirds the full size of the charts taken from the instrument.

(Continued on page 229)



The Shock and Vibration Recorder with Which the Comparative Records Were Made

Lea Transport Bill Hearing

Carl R. Gray makes presentation as sessions before House committee enter second week

WASHINGTON, D. C.

CARL R. Gray, vice-chairman of the Union Pacific and a member of President Roosevelt's railroad committee-of-six, was the witness before the House committee on interstate and foreign commerce as its hearings on Chairman Lea's proposed "Transportation Act of 1939" entered the second week. Interstate Commerce Commissioner Walter M. W. Splawn, the I. C. C.'s 1938 chairman and chairman of the President's first railroad committee—the so-called Splawn-Eastman-Mahaffie Committee—completed his presentation on January 27 after having occupied the witness chair during last week's four sessions.

Mr. Gray completed his direct presentation at the January 31 session, after which, like Commissioner Splawn, he elaborated upon this testimony in answering questions from committee members. Mr. Gray's statement was a highlighting of the committee-of-six report which he said had been made in response to the President's request for a study of the transportation situation, as distinguished from a survey of railroad problems alone. Mr. Gray went on to point out how the President had said that he had chosen the six because they were experienced railway men. In this connection the witness had previously noted that the combined railroad service of the committee-of-six members totaled 235 years. In submitting the report they told the President that, although they are railroad men, they had not advocated anything for the railroads at the expense of other transport agencies. In fact, according to Mr. Gray's statement, they tried to "lean over backwards" in developing their thesis that while the railroads were entitled to equal treatment, they were entitled to no preference.

A Philosophy of Transportation

Later Mr. Gray said that the committee-of-six believed it had outlined a philosophy of transportation, putting forward recommendations which were "consistent with themselves." It does not think the measures which it recommends will solve the transportation problem—only an improvement in business will do that—but it does believe that they would ameliorate conditions. Also, it was brought out during the questioning of Mr. Gray that the committee-of-six plans to offer a bill carrying out its recommendations. That bill is now being drafted and will be ready in "a very short time," according to Judge R. V. Fletcher, vice-president and general counsel of the Association of American Railroads.

Commissioner Splawn's testimony subsequent to that reported in the *Railway Age* of January 28 was in response to questions from members of the committee. Such questioning brought out the commissioner's view that "cut-throat" rate wars comprise one of the most serious of present-day problems in transport regulation. He went on to explain how the bill, by extending the commission's minimum-rate powers to all types of transport, would not eliminate competition, but would merely set up rules under which a fair fight could be carried on

—"fight for the traffic, but do not hit below the belt," the various forms of transportation would be told. The I. C. C. would be the referee.

Representative Mapes, Republican of Michigan, expressed concern over the idea of bringing carriers on inland waterways under I. C. C. jurisdiction; and the witness replied by asking why the railroads should not be freed from regulation if competing water carriers are to be left alone. He added, however, that the elimination of regulation would be "suicidal." Commissioner Splawn told Representative Cole, Democrat of Maryland, that the bill would permit the commission to require the transfer of traffic from one railroad to another only when a good case could be made out for such action. Representative Boren, Democrat of Oklahoma, brought out how the office of administrator would perhaps add \$1,000,000 a year to the I. C. C. budget; but Commissioner Splawn called this a small amount when one considers that the administrator would be at work conserving some \$50,000,000,000 of assets in the transport industry.

Splawn Committee Rejected Subsidy Idea

The Splawn-Eastman-Mahaffie committee, the witness told Representative Bulwinkle, Democrat of North Carolina, gave some thought to a subsidy for the railroads, but concluded that the transportation industry could stand on its own feet. It recommended Reconstruction Finance Corporation loans, which were "expected to be paid," as a "conservation measure." Representative Youngdahl, Republican of Minnesota, wanted to know if a member of the I. C. C. would be eligible for the administrator's position. Mr. Splawn did not think so. The same questioner then asked how a man of the proper background could be got for the proposed \$7,500 a year salary. The witness thought it would be "unfair" to thus limit the salary; and Chairman Lea explained that the salary figure for the administrator got into the bill "by inadvertence." "Put me down for \$12,500," said Representative Martin, Democrat of Colorado.

Questioned next by Representative Halleck, Republican of Indiana, Commissioner Splawn said that the bill should not be regarded as an emergency statute—it is "a long-range project." He went on, however, to cite specific provisions which he thought would relieve railroad financial distress. On that list were the provisions relating to pooling, consolidations, minimum rates, prevention of wastes and the elimination of rate wars, which the witness thought would bring "very large savings." Also, the administrator is expected to bring about other savings in expenses, it being the assumption that this gentleman will be "a statesman, a very intelligent and wise individual, experienced in business matters." And there are the reorganization provisions, dealing with a "sad situation," but its working out will bring "more solvency" into the railroad industry.

Continuing, Mr. Splawn also cited Title IV which presupposes that the carriers will find it advisable to borrow money; and the repeal of land-grant rates, a

relatively small matter to railroads as a whole, but important to the roads involved. All in all the witness thought Chairman Lea had presented "a minimum of what you might do." He was unable to give Mr. Halleck an estimate of the average time consumed by a rate case, but he did not approve of the questioner's suggestion that the extra outlay which the bill would cause might better be applied to the employment of additional examiners under the existing set-up. The latter, the witness insisted, is not the problem—the idea is to give commissioners "time for specialization." He had given no thought to the idea of requiring that only three members of the proposed five-man appeal division could be chosen from any political party; because politics don't enter decisions of the commission—"we don't divide there on party lines."

Representative Wadsworth, Republican of New York, inquired about the bill's definition of transportation, particularly whether the regulation of warehouse rates were contemplated. The witness understood that the reference to warehouses contemplated only the reaching of concealed rebates; it was not the intent to regulate commercial warehouses. He told Representative Hinshaw, Republican of California, that the bill did not call for the payment of tolls on waterways; and Mr. Splawn would want to hear "more about that" before making up his own mind. He added that the committee-of-six has a "definite recommendation" in that connection; and he thinks that the government-owned Inland Waterways Corporation should be treated no differently than a private carrier.

Several questions with reference to railroad rates and differentials were asked by Representative South, Democrat of Texas, who saw a "danger" that the "admittedly-high" railroad rates will become a general yardstick if truck rates are to be tied into rail rates. Commissioner Splawn explained that the bill doesn't touch maximum rates, adding that the minimum-rate provisions propose for other agencies the same regulation in that connection as that now applied to railroads. When Mr. South cited some specific rates on grain, the witness said that in such comparisons the usual practice is to compare a proportional rate out of a rate-break point with a through rate out of the same point; he added that the grain enjoying the proportional rate paid "quite a rate" getting into the rate-break point. He told the same questioner that the Attorney General may submit to the committee an opinion on land-grant rates.

Administrator Should Be "Business Man"

Here the questioning was again taken up by Mr. Mapes who was interested in the I. C. C. attitude toward the Splawn-Eastman-Mahaffie report. The witness explained that 10 commissioners "went along" although they had very little time to consider it. The commission has not yet passed on Mr. Splawn's separate expression which accompanied that report. Mr. Mapes was "impressed" with the fact that the majority report of the Splawn-Eastman-Mahaffie committee and the report of the committee-of-six said nothing about the size of the I. C. C. He added that the administrator provisions "swing toward the co-ordinator idea" which "was never very well received." Mr. Splawn replied that the co-ordinator was an experiment in the light of which Chairman Lea had drawn his bill with a view of not limiting the President to members of the commission in his search for an administrator, whom, the witness added, should be "a business man."

After citing the bill's provision permitting railroads to retire employees over 65 years of age, Mr. Splawn told

Mr. Mapes that witnesses representing the committee-of-six would be "high authority" on what further provisions should be made for displaced labor. The ideal, he added, is to bring about a situation wherein railroads will be strong and able to pay good wages and give good service. To another question Mr. Splawn replied that he has no fear that the provision whereby the commission's chairman would be appointed by the President would make that office any more powerful than it now is.

The latter question brought from Mr. Martin an observation to the effect that a lot of the questions indicated that "if we just had some way of eliminating the President of the United States everything would be 'jake.'" The Coloradan went on to comment on railroad rate reductions to meet motor competition, suggesting that it might be advisable for the carriers to make a showing in this connection when they come to support his bill for repeal of the long-and-short-haul clause in order to counteract the claim that fourth-section relief would result in rate increases at points where there was no water competition. Mr. Martin did not want any comment on this from the witness—he put it out as "a word to the wise."

Commissioner Splawn told Representative Ryan, Democrat of Minnesota, that he regarded the bill's proposed declaration of policy as a "fair declaration." Mr. Ryan wanted to know how it changed the present policy, and the witness replied that the latter is "not quite known." He went on to explain that various promotional agencies have from time to time been set up by the government to aid a particular type of transport, and declarations of policy have usually been associated with a particular bill for some specific purpose.

Wolverton on I. C. C. Responsibilities

Representative Wolverton, Republican of New Jersey, questioned Commissioner Splawn at some length regarding the extent to which the bill carried out the recommendations of the committee-of-six. When the witness replied that only some of the management-labor recommendations were covered, Mr. Wolverton asked if it would not seem "orderly" that some one would have offered a bill based on the findings of a group that was created by the President to meet an emergency situation. In this connection it was Mr. Wolverton's further view that the I. C. C. would be the "logical body" to frame recommended legislation; and he asked if the regulatory body were "recognizing any responsibility" in the situation facing the railroads. Mr. Splawn thought his questioner would find an answer in the first 27 pages of the I. C. C. annual report; but Mr. Wolverton stated "very frankly" that last year's actions of the President in appointing two railroad committees would seem to him to make the situation such that "the I. C. C. would have submitted legislation."

Chairman Lea broke in to explain that "practically all" suggestions of the Splawn-Eastman-Mahaffie committee are in the bill. The submission made to Congress last year by the President, he went on, was that Congress take the initiative. Mr. Lea has no disposition to confine legislation to the provisions of the bill, and his committee is tied only to a program of "rendering the best service possible." While he felt no obligation to embody the suggestions of the committee-of-six, the omission indicates "no disposition to reject them." The chairman added that the committee-of-six was confined to the railroads whereas the committee on interstate and foreign commerce cannot be so confined; its aim is that "all agencies will be healthy."

Mr. Wolverton insisted that the situation merited "the

attention of the I. C. C." as he went on to take up the committee-of-six recommendations one-by-one so that Commissioner Splawn might indicate which ones were covered by the bill.

Testimony of Carl R. Gray

Before getting into the recommendations of the committee-of-six Mr. Gray made some general observations, including an expression of his view that transportation in this country presents "about as confused a situation as can very well be conceived." He went on to touch upon the beginnings of railroad regulation which grew out of the set-up wherein the railroads enjoyed a transportation monopoly. Mr. Gray's experience ante-dates federal regulation of railroads by about four years; and "with a keen appreciation of the fact that the statute of limitations has run," he was willing to admit that he was "part of the part of the reason for that legislation."

This "railroads-are-a-monopoly" theory of regulation, Mr. Gray explained, has continued despite the growth of highway transport and the post-war revival of inland waterway transportation. The result, he added, has been the development of a set-up "far beyond the necessities of the country." It is his view that the reasons for the passage of the Interstate Commerce Act in 1887 apply now to the general transport field just as they then applied to the railroads.

Another point made by Mr. Gray in his preliminary remarks concerned the role of the railroads in national defense. His experience in the last war as director of the U. S. Railroad Administration's division of operations convinces him that "no major war can be successfully waged by this country without a thoroughly efficient system of railroads in high physical condition." Thus the committee-of-six pursued its studies "in the belief that we need a national system of transportation that will serve this country not only in time of peace but particularly in time of war." And it believes that there is no way to bring that about except by the same regulation for all.

It seemed "rather significant" to Mr. Gray that Congress has never expressed a policy with respect to railroad transportation, although it has done so with respect to highway and water transport. Thus his committee's recommendation for a declaration covering all agencies. Explaining the recommendations with respect to the readjustment of the regulatory set-up the witness characterized that calling for regulation along functional lines as "one of the most important." He went on to say that when the committee-of-six said "functional" it meant that any phase of regulation should be handled by the same body or division for all modes of transport. In connection with air transport the national defense angle was recognized, but it was nevertheless thought that "common sense" should be used as to the extent to which air carriers thus fostered are permitted to invade the commercial field.

No Criticism of I. C. C.

The committee's recommendations as to a division of regulatory duties between the I. C. C. and the proposed Transportation Board, Mr. Gray insisted, was never intended as a reflection on the I. C. C., which in his opinion "has always regulated according to its interpretation of the intent of Congress." It is to the law that the committee-of-six addressed itself, knowing "how efficiently and well" the I. C. C. has endeavored to apply the present statute. The four functions (rates, services, valuation and accounting) which the committee-of-six

would leave with the commission, Mr. Gray explained, are quasi-legislative and quasi-judicial. Other functions which would ultimately be given to the Transportation Board seemed to the committee "more generally to need practical and business consideration."

The proposed Board's first assignment, however, is regarded by the committee as of "primary and fundamental importance." That is the job of surveying the transportation system with a view to developing facts upon which the regulatory body and Congress can determine policies with respect to each agency's "proper place." In the latter connection Mr. Gray went on to say that there is now room for difference of opinion as to the extent of subsidies to water transportation, although there can be little room for argument about the existence of such subsidies. Thus his committee recommended tolls which would reimburse the government for navigation expenditures on inland waterways and coastal canals. Also, it believes that in 20 years the government has certainly done enough "demonstrating" with the Federal Barge Line.

As to highway transportation the committee points out a distinction based on the fact that highway users do pay something; but it thinks that the proposed Transportation Board's "impartial study" should bring forth facts to settle this controversy which is not as easily resolved as that with respect to waterway subsidies. With reference to taxation Mr. Gray cited the committee-of-six's recognition of the fact that state taxes comprise the main railroad problem in this connection. He passed on with an observation on the lack of uniformity as between states, adding that "some of the most weird computations are used."

Continuing, the witness discussed briefly his committee's recommendations with respect to relief from costs of eliminating grade crossings and the reconstruction of bridges as a result of waterway improvements, and the elimination of land-grant rates. In the latter connection he found a distinction between the recommendation of his committee and that of Commissioner Splawn. Commissioner Splawn, as Mr. Gray understood him, would require the government to pay commercial rates, whereas the committee-of-six would merely cancel the land-grant rates, leaving in the Interstate Commerce Act that provision which would permit the government to negotiate contract rates with the railroads.

After brief reference to the recommendation for a special reorganization court the witness passed on to that calling for repeal of the Interstate Commerce Act's provisions making the I. C. C. responsible for the prescription of a general plan of consolidation. Here Mr. Gray briefed the committee-of-six view to the effect that "consolidation's the thing"—because co-ordination, beautiful in theory, won't work out in practice where loss of prestige or strategic position is at stake for some road. In this connection the witness repeated the committee's statement that it knew of no way to compensate a road for surrender of a position it had acquired by "pioneer effort, foresight, initiative and the expenditure of vast sums of money . . ." Consolidations, Mr. Gray added, do not present such difficulties because their terms would recognize the contributions of each road involved to the merged company.

Maintenance Loans a "Make-Work" Proposition

In considering the recommendation with respect to maintenance loans, Mr. Gray told the committee that it was but fair to bear in mind that this is "fundamentally a make-work proposition." Also, he pointed out that Congress has expended money for that purpose on high-

ways and waterways, and none of it will be paid back. Thus the committee-of-six recommended "make-work" maintenance loans on terms of "great liberality," but it anticipates that most, if not all, of the money would be repaid. And no such loan could go to a carrier which is paying any dividend on its stock or interest on income bonds. The recommendation with respect to equipment loans, the witness went on, would grant such financial aid up to the full cost of the equipment with trust certificates as security.

Other matters covered by Mr. Gray in his direct presentation were the committee-of-six's proposed new rate-making rule and its recommendation calling for repeal of the long-and-short-haul clause of the Interstate Commerce Act's fourth section. In the latter connection the witness said his committee felt that the interests of shippers and the railroads are not sufficiently protected in that the I. C. C. feels that it should pass on whether or not a rate requiring relief from the long-and-short-haul clause is "wise." Such a determination, he went on, ought to be a function of management, adding that the I. C. C. would retain all necessary rate powers.

The questioning of Mr. Gray was opened by Representative Pearson, Democrat of Tennessee, who wanted the witness' opinion as to the desirability of sectional representation on the I. C. C. While conceding that it would be an advantage to have a commission that "understood the country," Mr. Gray wouldn't want to put a geographical limitation in the law; he does not think the present requirement whereby no more than six members can be from one political party is necessary. Next Mr. Pearson revealed that in his consideration of the proposal to repeal land-grant rates he has had some misgivings as to whether such action might establish some precedent in view of other operations of the government. He mentioned home loans, by way of example.

Suggests Nine-Man I. C. C.

Asked by Representative Bulwinkle if the committee-of-six would leave 11 members on the I. C. C., Mr. Gray replied that they did not undertake to suggest a number, although they felt that a commission of nine members would be adequate for the duties involved in the four phases of regulation which it was proposed to leave with the I. C. C. The proposed Transportation Board, the committee-of-six felt, should "find itself" as to numbers, but Mr. Gray said it should "certainly" start with five members. He does not think that his committee would "realize its aspirations" if the law were changed, but all regulatory duties left in the I. C. C.—the committee's conception of the right Transportation Board member is that of "a somewhat different kind of individual" than the type that deals with rate matters.

Next Mr. Bulwinkle wanted to know what the railroads might do to better their own condition; and Mr. Gray thought it "only fair to say" that the railroad industry has gone further in meeting new conditions than any other business. He went on to point out how the committee-of-six had suggested certain railroad surveys, but called them "very small" possibilities, save for the consolidation recommendation which has "a great deal of possibility." Then, Mr. Bulwinkle asked if Mr. Gray considered railroad management "perfect." "Far from perfect," replied the witness, adding that "it's been improved since I left the detail." He went on to say that all industrial management could be improved, but he is nevertheless "very proud" of railroad management and "proud of its showing."

Quoting references to compulsory consolidation from a recent address of Interstate Commerce Commissioner

Joseph B. Eastman, Representative Mapes asked for the witness' comment. Mr. Gray saw nothing to be gained through compulsory consolidation which in his opinion would result in the "most endless litigation" that anyone ever encountered in the railroad business. Also, the witness, while unaware of Mr. Eastman's present view, pointed out that the former co-ordinator subscribed to the report of the Splawn-Eastman-Mahaffie committee which did not think compulsion should be applied to effect consolidations. Asked by Representative Martin of the committee-of-six had considered the protection of employees in consolidations, Mr. Gray replied that there was no disagreement between the committee's management and labor members on that score—they have a "complete understanding." Mr. Martin also brought out that land-grant reductions are a growing obligation on the railroads in that, as Mr. Gray put it, there was 70 years ago no appreciation of the fact that the government would be in "every class of business"—shipping all types of commodities.

Private Operation Fosters Efficiency

Questioned by Representative Halleck as to his references to an over-supply of transportation, Mr. Gray explained that the present transport set-up is "over-developed for any stage of business we've ever known." He went on, however, to point out how difficult it is to abandon facilities, it being his experience that any given community appreciates its railroads only twice—once before it gets it, and again when it loses it. Mr. Halleck then wanted Mr. Gray's opinion as to whether the utility of the railroads as an arm of national defense and as a servant of business will be fostered by continued private ownership. The witness replied that in his opinion the country can have efficient railroads only under private operation. Mr. Halleck was of the same opinion.

Mr. Gray went on to say that during the last war he found himself a railroad president one day and a government official in the U. S. Railroad Administration the next. In the former role everything he did was presumptively against the public interest, whereas as a government official, doing the same things "and more," his acts were presumptively in the public interest. However, Mr. Gray went on in facetious vein, he didn't let that spoil him—he knew the government had reposed the power in "safe hands," but he didn't know "any other fellow" he would trust as far. Later, in the same connection, the witness told Representative Crosser that the first thing the officers of the government railroad administration did was to "throw over every restrictive law and proceed to operate."

Representative Hinshaw asked if it would be in the public interest for the government to take over railroad rights-of-way and lease them to the railroads, just as it now owns the ways of highway transport. Mr. Gray didn't think the railroads would be in any different "out-of-pocket" position as tenants than they now are as owners of their rights-of-way. He added that the committee-of-six had advocated no subsidy for railroads because it does not think that such would be a proper approach—it believes every agency should pay its own way.

The fact that the committee-of-six is having a bill drafted was brought out by Representative Cole, Democrat of Maryland, who then wanted to know why that committee did not instead address itself to possible amendments to the Lea bill. Mr. Gray replied that his group thought it could do a better job by drafting its own measure, since its "philosophy is a little different." Also, the witness assured the committee that either he or

George M. Harrison, chairman of the Railway Labor Executives' Association and one of the committee-of-six's three labor members, would be available for questioning on the bill. Chairman Lea assured the committee-of-six that the House committee would be glad to place the former's bill in printed form. Mr. Cole then asked that the committee-of-six submit also its criticisms of the Lea bill, section by section; and Mr. Bulwinkle feared that the committee might be handicapped if the draft of the committee-of-six bill were delayed very long. In the latter connection Chairman Lea thought his committee's first problem was to determine what should be done, adding that specific recommendations were before it in the reports of the committee-of-six and of the Splawn-Eastman-Mahaffie committee. Here Judge Fletcher said that the committee-of-six bill would be ready in a "very short time," and that he also hoped to express the views of the railroads on the Lea bill at such time as he makes his presentation before the committee.

With this matter thus disposed of Mr. Gray concluded with answers to a few additional questions, making way for R. L. E. A. Chairman Harrison to begin his testimony at the February 2 session.

Wheeler Drafts Reorganization Bill

WASHINGTON, D. C.

DECLARING that current railroad reorganization plans "fail to make sound provision for future financing through stock, and so are harbingers of renewed insolvency," Senator Wheeler, Democrat, of Montana and chairman of the Senate interstate commerce committee and the special subcommittee investigating railroad finances, introduced in the Senate on February 1, the first of a series of reports reviewing the holding company situation and making recommendations for legislation based on the evidence submitted to the subcommittee which held extensive hearings during 1936 and 1937. The first report, entitled "A Problem in Railroad Reorganization: Reorganization Plans as Causes of Recurrent Insolvencies," is concerned with the present tendencies in railroad reorganizations, using as illustrations plans that have been proposed in the reorganizations of the Missouri Pacific and the Wabash.

Wheeler Issues Statement

At the same time the Senator introduced the report in the Senate he released a short statement in which he said that "The report which I am submitting today, summarizing one aspect of the committee's investigation, shows that the 1917 Missouri Pacific reorganization and the 1915 Wabash reorganization both led to recurring insolvency in less than two decades. Worse still, it shows that if plans recently proposed are carried through, the reorganized companies may not live even that long. Many current plans proposed for the vast number of insolvent roads merely postpone the day of reckoning. On the surface they may seem conservative and even drastic; but when you study them you find that they are going to lead to a renewed piling up of debt, a renewed overload of fixed charges, and repeated bankruptcy in the next period of reduced earnings. It is not unlike the building of flimsy shanties in hurricane country."

The Montanan also announced that he had prepared

a bill which he is now discussing with other government agencies, for establishing minimum standards in railroad reorganizations. The bill, according to the Senator, would also include provisions for speeding up reorganization procedure, and for revising those provisions of the present railroad bankruptcy statute which have the effect of "giving holding companies a stranglehold on railroad reorganizations."

Senator Wheeler's statement closes by adding that "The report comments on several practices of railroad reorganizers, including the issuance of so-called 'income bonds' which are bonds in name only, the reliance on inadequate sinking fund provisions where normal net income expectation is insufficient to meet the sinking fund payments, the use of 'open-end mortgages' with their aftermath of swollen fixed charges and diluted protection to bondholders, and, underlying all the other errors, undue over-optimism in estimating future earnings, resulting in capital structures that are out of gear with the earning power of the property."

"These practices have in the past meant recurring insolvencies. They are being imbedded in plans for the future. Legislation establishing minimum reorganization standards is urgently needed if the companies now being reorganized are not to collapse a third or a fourth time at the next touch of adversity."

"Open-End" Mortgage Is Criticized

The committee report criticizes the use of the so-called "open-end mortgage" and the income bond. "The 'open-end mortgage,'" in the words of the report, "is one which may allow the issuance of additional bonds without a corresponding or adequate increase in the earning power which protects those already outstanding." This feature, says the report, in a mortgage indenture provides a flexible medium for financing future capital requirements, but at the risk of dilution of the earnings coverage which is the bondholder's real security. Testimony from the hearings is then cited to show that the reorganization plans of both the Missouri Pacific and the Wabash are "open-end mortgages."

On the subject of income bonds which have been approved by the Interstate Commerce Commission in several reorganization cases, the subcommittee says that "Although nominally backed by security and payable at a fixed maturity date, income bonds are in certain governing respects intrinsically the same as would be preferred stock of equal rank in the corporate hierarchy. There are, to be sure, certain extrinsic legalistic differences, but the major economic characteristics are identical. Like preferred stock, income bonds share in earnings only if there is an excess after fixed obligations have been paid; like preferred stock dividends, income bond interest is a charge on the company's income, but not a current charge upon the corpus of its property; and the holders of income bonds, like the holders of preferred stock, are without the power of foreclosure for the mere failure of the company to pay a return."

Hits Insurance Companies

The committee also accuses the insurance companies of preferring income bonds to preferred stock because of their belief that they would be better dealt with if and when government ownership of railroads should come. "It thus appears," says the report, "that some railroad reorganizers are concerned more about getting the most for their own interests in the event of future government ownership than about guarding against future railroad bankruptcies. Paradoxically, such future bankruptcies

may constitute the very condition that might ultimately make government ownership necessary."

The suggested treatment of securities in the reorganization of a bankrupt railroad would be, according to the report, to follow the principles laid down by the United States Supreme Court in the Boyd case in which the court held that creditors of a railroad company should come first and that stockholders would be allowed nothing unless the value of the assets of the reorganized corporation is something above a fair equivalent for the creditors' claims.

"The simplest and most direct, albeit the most painful, remedy for this knotty problem in railroad reorganizations," continues the committee report, "would be to pare the financial structures to a size not only compatible with such prospective earnings as may reasonably be expected, but small enough to enable the railroads to finance their future capital needs by the sale of stocks rather than bonds. Future stock financing must be made a practical likelihood, not merely a theoretical possibility."

Summary and Conclusions

A summary and conclusions of the committee follow:

The histories of the Wabash and Missouri Pacific, from their last reorganizations to their present bankruptcies, are examples, of a common phenomenon in railroad finance. A railroad emerges from reorganization with what superficially appears to be a balanced capital structure, yet it soon finds that structure so expanded that earnings no longer cover fixed charges and reorganization is again necessary.

Although both the Wabash and the Missouri Pacific aggravated the capital top-heaviness that ultimately caused their collapse, by issuing fixed interest-bearing bonds to pay for the purchase of stocks in other roads, such action alone would not have proved fatal; nor will the mere abstinence from similar practices in the future be sufficient to forestall further bankruptcies. One of the major causes of the downfall of the Wabash and the Missouri Pacific was the enlargement of their bonded debts to provide for additions and betterments, replacements, and modernization. Unfortunately, many such expenditures, although indispensable if a railroad is to continue as an efficient agency of transportation, add little if anything to its earning capacity. The inevitable result is embarrassment in meeting interest payments on the enlarged debt, and the denouement is bankruptcy.

There is no reason to suppose that sound railroad operation in the future will require fewer non-income producing expenditures than in the past. Yet, the reorganization plans for the Wabash and the Missouri Pacific seem to be almost insufficiently influenced by this obvious requirement. Indeed, even aside from the necessities of future financing, they seem to be geared for higher net revenues than may conservatively be expected. The bitter lessons of the past seem never to restrain the excessive optimism of railroad reorganizers.

To be sure, the plans for the Wabash and the Missouri Pacific provide for income bonds which have the ostensible advantage of not subjecting the companies to a contractual duty to pay interest; and there are conversion provisions apparently designed to bring about the replacement of such bonds with stocks. There are also sinking fund provisions apparently designed to bring about the eventual retirement of such bonds in order to permit conservative future financing. But in the light of realistic expectation of future earnings, the conversion and sinking fund provisions appear to be little more than mere formalities. The probability is that the income bonds will remain in the corporate structures, ready to absorb whatever earnings may accrue above fixed charges, and leaving no excess to make future issues of stock attractive to investors. As a result, future financing will again require an expansion of bonded indebtedness, and the cycle that ends in reorganization will again be started.

The indicated remedy is to pare the corporate structures down to a size, not merely presently compatible with earnings, but small enough to allow a sufficient margin of safety to make future financing through the issuance of common stock an actual probability. In the cases of the Wabash and the Missouri Pacific, such an operation would require the rejection of claims

now asserted by the Pennsylvania and Alleghany interests, and a realistic attitude by the insurance companies toward income bonds. If the influence of these interests is allowed to interfere with an independent determination of the maximum financial burdens that the railroads can safely bear, the present reorganizations are likely to prove mere preludes to repeated bankruptcies. Moreover, the losses which the Pennsylvania and Alleghany interests are now reluctant to accept, but which have long since irreparably taken place, can be postponed in recognition only.

Consummation of the proposed plans would not only be a costly waste of reorganization expenses on a temporary make-shift, but would also adversely affect all the shippers whom the Wabash and Missouri Pacific serve, all the workers they employ, and all the industries that supply them with materials.

Because of the sensitiveness of our whole economy to the financial stability of railroads, sound provisions for the future financing of reorganized railroads are a matter of national concern.

Reduction of Locomotive Vibration

(Continued from page 223)

fore-and-aft horizontal shake of the locomotive largely due to the unbalanced forces of the reciprocating masses and inherent factors of steam distribution. An average measurement of this line on the test with the old-type buffer is approximately 0.20 in. as compared with 0.06 in. with the new buffer, or a reduction of approximately 66 per cent. This indicates that the damping properties of the improved design of buffer have been very successful in absorbing or diminishing the horizontal shake so that it indicates less than one-third of that obtained with the old buffer.

The third line on the chart, labeled "Vertical Acceleration," has a definite relation to the upper line and is really an indication of the change of velocity during the vertical movement, or, in other words, the shock of the impact caused by the vertical movement. One-inch movement of the pencil† represents an acceleration of one G (32.2 ft. per second per second). A comparison of the maximum deflection of this line shows 1.40 G with the old buffer and 0.53 G with the new buffer, a reduction of approximately 62 per cent. If it were possible to determine an average of this line, it would probably be still less—only about one-fourth of the average obtained with the old buffer.

The best possible counterbalancing of a locomotive is highly essential for the best practical and economical results from a locomotive and track structure standpoint. But even when that is accomplished, the test data described herein indicate how a buffer making the tender, in effect, an integral part of the locomotive can absorb the effects of unbalanced forces and at the same time provide increased comfort for engine crews and train passengers and afford the means for greatly reduced maintenance costs.

In addition, the damping effect afforded by the new buffer suggests the possibility of still further reduction in the percentage of locomotive reciprocating weights balanced which, in turn, will decrease dynamic augment and the resulting track stresses.

COMMUTERS IN SOVIET RUSSIA whose suburban trains arrive late at destination termini are given a slip by station attendants which serves as an excuse to the boss for late arrival at the office. The number of late commuters' trains at one Moscow terminal may be judged by the fact that some 7,000 to 8,000 such excuse slips are being issued there almost daily, according to a dispatch to the New York Times by Harold Denny, a special correspondent.

Giving the Passenger What He Wants

Missouri Pacific finds its bus subsidiary a valuable adjunct in providing modern passenger service

By P. J. Neff*

Vice-President, Missouri Pacific Transportation Company

WHEN, in 1928, the Missouri Pacific approached the question of offering passenger transportation on the highways in addition to its rail service there was much more confusion in the two industries than there is today. Automobiles had captured the public's fancy and travel was fast leaving the railroads for the highways. Bus lines were just becoming a major factor in transportation, appealing for travel with reduced rates and in many cases with more frequent schedules than offered by the railroads, and their competition with each other and with the railroads was at that time largely unregulated. The railroads had only entered the bus field in a very experimental way so that in our investigation we were plowing a great deal of new ground. We found that the then railroad-operated bus lines were competitive with, rather than co-operative or co-ordinated with, railroad service. It is true that some effort was being made to use railroad stations, to provide suitable connections with trains and to establish friendly relations between employees. However, employees were still suspicious of each other and the elements of time and experience had done little to compose their differences. Some trains had been taken off branch lines and the strictly railroad employee could not adjust himself to the belief that the bus was doing anything except to take his job. The thought that the public must be completely served was not so easy to swallow if it meant less railroad transportation.

Naturally, we asked ourselves the question "Why should we establish an agency to compete with the railroad?", even though it did offer possibilities for co-ordination, as it was obvious that competition and co-ordination would go hand in hand. The answer to that question was more difficult at that time than it is now, and after all, it is comparatively simple. Some people prefer to travel in their own cars, some like to fly, some like bus transportation and others prefer railroad trains. Our conclusion was that a travel-minded public was demanding more transportation facilities and it seemed obvious that this demand could best be satisfied by offering a selection of service which, properly co-ordinated, would be less expensive to operate than two unrelated separate services, neither of which completely fulfilled public needs.

With that conception our bus line was organized as a wholly-owned subsidiary and has extended its operation over about 4,200 miles paralleling the Missouri Pacific. While it may be argued by some that the same purposes could have been accomplished through co-operation with independent bus lines, it was our view that by owning the

subsidiary and giving it the advantage of facilities already devoted to transportation use, the total cost of providing such service would be reduced.

Good Service Necessary

We believed, and have since proved correct, that a half-hearted or inadequate highway service would no more be satisfactory to the public than a similar rail service, and we determined to give a good highway service, independent of railroad considerations, even though it would compete with the rails. To do less would invite additional highway competition by both bus and private car. There was the advantage, however, that in fulfilling the highway requirement we could in many instances supplement the rail service. It stood to reason that this would avoid wasteful transportation.

One of the major difficulties of the railroads has been how to solve the branch line problem. With the advent of good roads, travelers were no longer content to wait at junction points for the slow moving local train (often a mixed passenger and freight train) and unless a more complete service was provided the main line trains would lose this travel also, and private cars or buses would be used for the entire journey. Frequently, the growth of the country was such that the highway paralleling the branch line railroad had become a major lane of travel, but offering insufficient revenue for the rails to improve or extend their lines. The bus could fill the requirement of this territory at less expense than the railroad and still be a feeder for it. There are also numerous instances where the highways did not follow the exact line of the railroad and communities developed where transportation was needed. The bus again met this requirement for service, and with proper adjustment of schedules, in effect brought the railroad to these communities and offered them, by a short journey, the services of railroad trains.

Along the main lines of the southwestern railroads, as elsewhere in the country, there has been an insistent demand for increased speed of trains. The population of the Southwest is not yet sufficient to justify a large number of trains, and as speed has become more and more a factor in holding travel the problem is how to provide a fast train service and at the same time serve all the communities. To some extent at least, the bus seems to have solved this problem by providing a service which will collect travelers in a given territory, transport them to junction points and permit them to board fast trains if they desire; or similarly they made ride fast trains to junction points and use bus service to destination; or again, a passenger may ride a bus in one direction and the train in another, thus offering a service without

* From an address delivered before a meeting of the Western Railway Club in St. Louis, Mo., on January 16.

which, in many cases, there is at least an even chance that he will choose the private automobile.

Co-Ordinated Services

In the territory where we have co-ordinated these services, more than 25,000 passengers per month are availing themselves of combination service and the benefits therefrom occur not only to the public but to the employees of the railroad and its bus subsidiary. It is an axiom that the public pays the bill, and if the combined cost of operating a joint highway and rail service, to satisfy public requirements, can be reduced by co-ordinated service under one management or common interest, the public bill for transportation is reduced accordingly.

On our lines railroad stations are used so far as practicable in common by both trains and buses; railroad ticket agents sell transportation for both and, in many cases, such combinations of service is all that justifies retaining the agent on the payroll. Railroad telephone and telegraph lines are used not only for dispatching buses as well as trains, but for furnishing information to travelers. The latter item is a distinct advantage accorded the patron of a railroad subsidiary because the cost of communication service is so great that in many instances independent bus operators do not go to such expense.

On occasions when there is an interruption to rail service, the bus can be used to good advantage in transferring passengers in order to avoid additional delays, and in a number of cases we have been able to keep the traffic moving on schedule. Similar handling has been given bus passengers when highways were impassable, the bus company in such cases purchasing railroad transportation for its patrons. While similar arrangements could possibly be made with independent bus lines, the facility of working out such arrangements through a subsidiary is greater because of the more direct contacts possible and the use of railroad wires. We have also found it practicable to run special buses to take passengers from delayed train connections to junction points or destinations when the limited number involved would not justify the operation of special train service. This works for the good will of the public and is certainly a convenience to them. This type of service also prevents disrupting train schedules which may have far reaching effect on many passengers.

As examples of how the cost of both railroad and subsidiary service is reduced, as well as improved, by reason of the use of co-ordinated facilities, safety, expert advice, solicitation of business, advertising, purchasing of supplies, conservation of facilities and accounting are all in the public interest for a reduced transportation bill.

Wider Travel Field

Statistics show that the combined revenues of the rail and bus lines today represent only one-twentieth of the public expenditure for transportation. Each industry is faced with the problem of how to attract more business. It is well known that the owner of a private car likes the availability of this method of getting around. It is known that this means of transportation is frequently less expensive, especially when groups of people are traveling together. These subjects are discussed in bus transportation circles, just as they are in railroad transportation circles. Pricing the product is of major concern in every industry. Each has to have sufficient revenue to meet expenses or ultimately pass out of the picture. A superior product will sometimes sell at a

higher price because the purchaser is willing to pay more. Transportation, like any other product, faces the problem of price versus quantity to produce revenue. Service which was adequate to the buyer yesterday may not attract him today. Certainly, if either bus or rail service is to succeed against the private car, it must not only be adequate but it must be priced correctly. To be adequate today, it must meet the competition of availability with the private automobile. If that cannot be done by the train alone, or the bus alone, but can be done by a combination of both, it is a step in producing greater availability of transportation and should, therefore, attract travel.

None of us would like to go back to the days of mud roads, and we should be grateful that an enlarged system of transportation facilities has contributed so much to the education and pleasure of the American people. Each branch of these great systems seems necessary in our present complex existence, and we should not go backwards. Each contributes something which the other cannot. If, by a better use of each, or a combination of both, we can still further serve, we will have contributed something to an improved transportation system, and will reap our reward accordingly.

A justifiable amount of service by all transportation agencies will add to public convenience and pleasure, and thus become a necessity particularly if co-ordinated in such a manner as to give maximum service at minimum cost. There will not, in the final analysis, be a surplus of transportation if this can be accomplished, but it is conceivable that by co-operation or co-ordination of existing public transportation in an intelligent way, a solution may, in part, be found to the problem of putting more people on all of our systems, without detriment to any.

Electrical Engineers Contribute to Railroads

ELECTRIC locomotives, relay protection of traction power systems, mercury-arc rectifiers for direct-current power supply and magnesium copper sulphide rectifiers for battery charging were transportation subjects discussed during the annual meeting of the American Institute of Electrical Engineers held in New York on January 23.

The relay system used for protecting the 11,000-volt distribution system and the 132-kv. transmission system of the Pennsylvania were described in a paper by E. L. Harder, Westinghouse Electric & Manufacturing Co. Circumstances surrounding railway operation, as well as utility power systems have necessitated a high degree of relay development. It is undesirable to put adequate protective devices on the locomotives, and because of this the responsibility has been passed back to the distribution system. The railroad relay system is somewhat more complicated than that required by other power systems, since loads shift rapidly and relay settings must change with change of load. Some of the relays are capable of discrimination and will clear a fault current that is less than the maximum load current of the line. They must select and drop out a section of wire in which there is a fault in less than $\frac{1}{25}$ of a second. Relays of many types protect the power and distribution systems so effectively that their operation goes practically unnoticed.

A study of the performance of the 3600-hp. New Haven electric locomotives was presented by Felix Kohn and F. H. Craton, both of the General Electric Com-

pany. These locomotives were described in the May 21, 1938, issue of *Railway Age*. The characteristic of the locomotive featured in the article is its ability to deliver output above the continuous rating for short periods of time. This quality makes it possible for it to make up lost time and haul loads in excess of normal. Compensating periods of reduced output permit this kind of performance. The locomotives are also capable of maintaining rigid schedules and it is possible to use them effectively for both freight and passenger service.

A paper entitled "The Magnesium Copper-Sulphide Rectifier Battery Charger for Railroad Passenger Cars" was presented by C. A. Kotterman of P. R. Mallory & Company, Inc. The rectifiers described are quiet in operation, have an efficiency in excess of 50 per cent and are suitable for use on a platform truck or for mounting on a passenger car. They are made in capacities of 100 amperes at 80 volts or 200 amperes at 40 volts. Recent models have been equipped with a current regulating device controlled by a voltage relay in the d.c. output circuit. By means of this control the rectifier will automatically supply the battery with maximum permissible charging current, and will reduce the charging rate to the required amount as the battery comes up to charge.

The rectifiers receive power from the 220-volt, three-phase a. c. lines, used also for driving the standby compressor motors on air-conditioned cars.

A paper, "Harmonics in the A.C. Circuits of Grid-Controlled Rectifiers and Inverters," was presented by R. D. Evans and H. N. Muller, Jr., both of the Westinghouse Electric & Manufacturing Company. The paper summarizes the results of an investigation of the harmonic currents and voltages in the a.c. circuits of grid-controlled rectifiers and inverters. It presents a method for pre-determining the harmonic voltages and currents in the supply circuits. Possible undesirable effects of a rectifier may in this manner be anticipated and avoided.

A paper entitled "Ignitrons for the Transportation Industry" was presented by J. H. Cox and G. F. Jones, both of the Westinghouse Electric & Manufacturing Company. The ignitron principle as applied to power rectifiers has introduced a new type which, within a limited range of sizes, introduces some qualities not possessed by the usual multi-anode type. It will apparently further extend the use of mercury-arc rectifiers. In fact, it now appears that these devices on practically all counts are superior to the rotary converter and may entirely displace motor-generators as rectifying units.

"Voltage Control of Mercury-Arc Rectifiers" is the title of a paper presented by G. R. McDonald, General Electric Company. It outlines progress made in controlling the output voltage of mercury-arc rectifiers. In general, equipment is now available to supply flat-voltage control, under- or over-compound voltage control, voltage control and current-limiting, current control and control suitable for other special applications, such as the equivalent of Ward Leonard control for starting purposes. The rectifiers are thus, in most respects, as flexible in their application as other types of conversion apparatus.

Glass-enclosed rectifiers were also a subject of discussion. This type is relatively simple, since no pumping equipment for the maintenance of vacuum is required. Rectifiers of sufficient capacity for heavy-traction requirements are not made in this country. Their capacity is limited as compared with the steel tank rectifier, and the opinion was expressed that for large power requirements, it would scarcely be justifiable to develop the necessary glass-blowing technique.

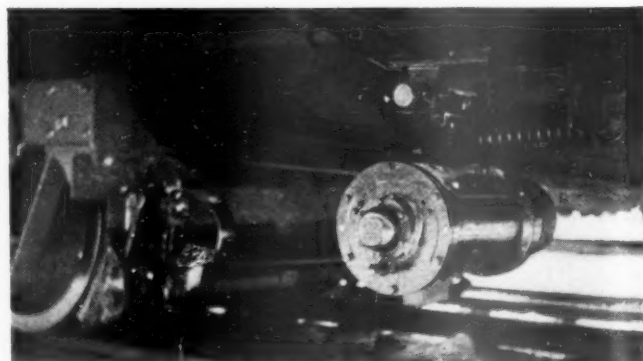
Rowley Electric Automatic Brake Control

THE electric automatic brake control equipment illustrated is designed to afford positive protection against the development of slid-flat car wheels under the most adverse conditions of high braking effort and slippery rails encountered in modern passenger-train service. Other advantages claimed, due to the elimination of wheels sliding, are: shorter stops; elimination of the delay and cost of cutting out cars for slid-flat wheels; savings in broken rails and equipment maintenance expense; also increased comfort and safety in railway travel. United States and Canadian patents on this equipment are held by F. I. Rowley, Superior, Wis., the initial application having been filed September 12, 1931, and 13 claims granted November 27, 1934.

Quite extensive service tests on two railroads indicate that the Rowley electric automatic brake control functions essentially as intended. For example, in January, 1933, the control was applied to Great Northern car No. 978, running between St. Paul, Minn., and Winnipeg, Man., and was removed from the car in April, 1934, after making 175,000 miles without the development of a flat wheel, while other cars in the same train had flat wheels from time to time during this period. It was placed in service on this run because conditions were such that wheel sliding took place quite frequently and the temperature at times was as low as -40 deg. F.

For additional test purposes, the equipment was applied on January 14, 1938, to Chicago, Burlington & Quincy passenger car No. 6115, having six-wheel trucks with clasp brakes and heavy foundation brake gear. The master pair of wheels which operate the brake control was given 15.72 per cent more braking power to start with and the brake-cylinder piston travel was shortened from 8 in. to 6½ in., thereby giving all wheels on this car about 15 per cent additional braking power. This was done in order to permit testing the brake control under unusually severe conditions.

The test car was then placed in service between Chicago and Minneapolis, Minn., on the daylight local,



Speed Governor Unit of the Rowley Brake Control, Which Is Designed to Prevent Slid-Flat Wheels

which made approximately 50 stops each day, and was allowed to run without further special attention. After the car had operated approximately 50,000 miles, the two ⅞-in. V-belts wore out and fell off while in service and the car immediately developed flat wheels. New belts were replaced and the car continued in service until August 1, 1938, for 40,000 miles more without any further development of flat wheels. Upon the satisfac-

tory completion of this test, the governor was removed from the car.

Construction of Brake Control

The Rowley electric automatic brake control is relatively simple in construction and easy to install, consisting of only four essential parts as shown in the drawing, namely: a speed governor, belt-driven from one of the car axles; a pressure-unloading valve, piped through a

one or two seconds, the solenoid valve then closing and stopping the further reduction of brake-cylinder pressure. Dependent upon conditions, therefore, the brake-cylinder pressure is not always lowered to the pre-determined setting of the unloading valve. The object is simply to discharge just enough air to keep brake shoe pressures below the point where they will cause wheel sliding.

The operation of the brake control is instantaneous and may be repeated as many times as required. The

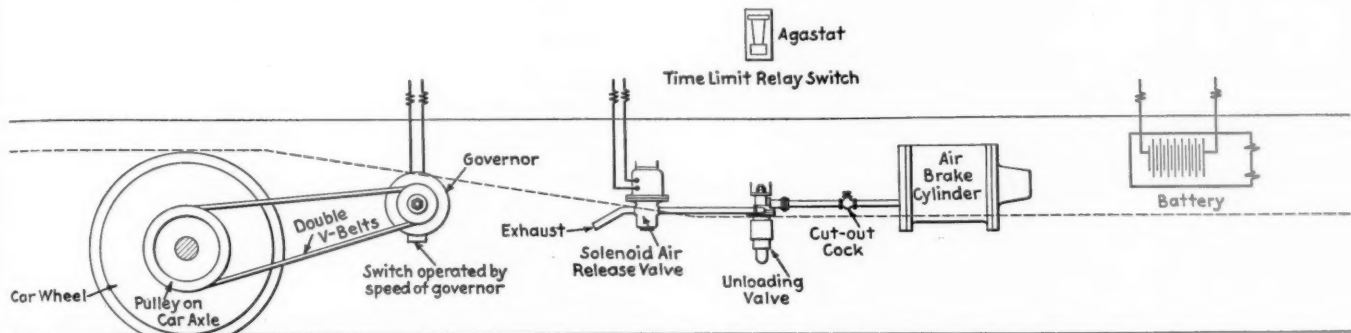


Diagram Showing the Location of Various Parts of the Rowley Electric Automatic Brake Control

cut-out cock to the pressure head of the brake cylinder; a solenoid air-release valve, connected to the unloading valve; and a time-limit relay switch, or Agastat, located on any convenient switchboard inside the car body and having electrical connections to the speed governor, the solenoid air-release valve and the car battery. The speed governor is of the mechanical fly-ball type, fully enclosed and driven by two V-belts from a single pair of master wheels, slightly overbraked so that if they are prevented from sliding, all other wheels on the car will be safe. This speed governor is equipped with an electric switch which is normally open in the upper speed ranges but closes whenever the wheel speed decreases below some fixed point, such as 5 to 10 miles an hour.

The pressure-unloading valve, or retaining valve, serves to limit the pressure released from the cylinder to a certain predetermined amount, usually about 25 lb. The cut-out cock provides an easy means of taking the equipment out of service in case of necessity. The solenoid air release is used to exhaust high-pressure air from the brake cylinder whenever the car speed gets below the setting of the speed governor and there is danger of wheel sliding. The Agastat performs the important function not only of actuating the solenoid to open the release valve but of closing it again after a definite and predetermined interval of time, usually one or two seconds. This restores the equipment to its original condition, ready for another brake application which may be necessary to bring the train to a stop or hold it on a grade.

Method of Operation

The general method of operation of the brake control, therefore, is briefly as follows: When the speed of the car wheel which drives the governor is reduced to the pre-determined rate of 5 to 10 miles an hour and wheel sliding is imminent, the fly-balls contract and close the electric switch, thereby energizing the electro-pneumatic solenoid valve through the Agastat. The solenoid valve immediately opens and exhausts brake-cylinder air down to a pressure sufficiently low that wheel sliding will not occur. The Agastat operates to open the electric circuit at the expiration of the pre-determined time interval of

Agastat cuts the entire unit out at the expiration of the time for which it is set, thus making full braking power available for further brake applications. For emergency braking, the control may be arranged to cut itself out or be left to operate, which ever is preferred. An important safety feature of the design is the characteristic which prevents any accidental interruption of electric circuits or failure of mechanical parts from interfering in any way with ordinary brake operation. The power consumption of the unit is small, since only $\frac{1}{10}$ ampere is discharged from the battery to the electric circuit while the car is standing still. The brake control is easily applied, and the only change required in the brake rigging is to give one pair of master wheels about five per cent more braking power than the others.

Eliminates Wheel Slippage

The operation of the Rowley automatic electric brake control is said to make available maximum braking effort and wheel retardation, without wheel slippage, regardless of speed or weather conditions. The equipment is designed to permit an engineman to apply the brakes as hard as he wishes, without operation of the control until such time as the wheel retarding effort is enough to overcome wheel-rail adhesion, when excess brake cylinder pressure is automatically vented to the atmosphere. It is only this volume of air which makes the difference between wheels revolving and wheels sliding that is influenced by the Rowley brake control. That this release of excess air to avoid wheel slippage is in no way inconsistent with good braking practice and stopping trains in the shortest possible distance is said to be shown by the fact that, in modern streamline trains, the brake-cylinder pressure is usually stepped down three times when stopping a fast train, regardless of whether there is wheel sliding or not. The particular advantage of the Rowley control is its design to step in whenever variable climatic and wheel-rail conditions, or excessive brake shoe pressures, are on the point of causing wheel slippage, and preventing this occurrence, with all that it means in the way of train delay, adverse passenger reaction, and also increased operating and maintenance cost.

Wabash Keeps Eye On Engine House Supplies

Run largest terminal without requisitions and turn stock over twice a month—Team work on locomotive repairs

By C. L. Wakeman

General Storekeeper, Wabash, Decatur, Ill.

IN the past few years a substantial reduction has been made on the Wabash in the average value of material which must be carried for maintenance and for standby purposes and a reduction of approximately 50 per cent has been made in the average stores expense of handling material. Rearrangements in railway operations and changes in storekeeping which have made these results possible include methods which are now employed in handling the supplies for engine houses.

A store room is to a roundhouse what a pantry is to a kitchen and serves best when so located. At the Decatur roundhouse, which is a large engine terminal, an average stock valued at \$11,000 is kept. This consists of common maintenance material and is used at the rate of \$21,000 per month. Special items, such as wheels, flues, tires, rods and crossheads for individual engines are furnished as required. The stock is handled by one helper and two laborers on each eight-hour shift. They also price requisitions and keep up price changes. The tool room is in the store room and the tools are handled by the same force, using a check system.

Maximum and minimum figures are set up for controlling the stock turnover and the quantity of each item of material which can be kept in stock and its rate of replenishment and these figures are adjusted in keeping with changing conditions. The maximum and minimum stocks of each item permissible are marked in bin labels and the stock books show the same information. The stock is counted monthly by the stockman and the quantities are shown in the stock book. This operation requires 6 to 8

hours and the difference between the quantities on hand and the established maximum figure is made up by transferring material to the roundhouse direct. No requisitions are prepared. When the material is delivered, the quantities transferred are circled in the stock book. Likewise, if any quantities fall below the prescribed minimum between stock-taking dates, a slip is sent to the storekeeper showing the item number and a brief description, and, upon receipt of the slip, the stock is replenished immediately.

At the Decatur roundhouse a check is made every 10 days for the purpose of replenishing engine supplies, oil, waste, tools, etc., and to obtain the required exchange of old articles for new. This practice promotes conservation. Stores delivery with the pick-up system of handling orders is used at the roundhouse and saves many trips to the store room and shop by mechanics and helpers. Material and supplies are delivered direct from the store to locomotives, from the locomotives to the roundhouse shop and from the shop to the locomotives. A delivery truck makes a trip every 6 to 12 minutes and a number of small common items are carried in a material rack on this truck.

Analyze Needs for Locomotives

An orderly system of arranging material for shop repairs to locomotives has also been developed. Information as to the time when a locomotive is to be taken out of service for shopping is always available and a care-



In the General Store at Decatur

ful inspection is made of each engine about 60 days before the shopping date. A report of this inspection is made to the superintendent of motive power, the shop superintendent and the stores department and shows the special items of material which will be required for individual locomotives and the store is notified of the exact date when they are to be overhauled. Items included in this report are axles, bolsters, driving boxes, cylinder bushings, bumpers, wheel centers, cylinders, deck castings, cross ties, frames, yokes, flues, rods, sheet steel, and tires.

After the engine is stripped, a check is made in the shop to verify the need for the special items ordered and the need for additional items. It is known from experience that certain items are usually renewed at each overhauling, including such parts as cross head shoes, journal bearings, side rod bushings, main rod bearings, main driving box brass, valve motion bushings, hub linings, journal perforated plates, rod and valve packing, and arch brick. Experience also indicates that certain other items require about 50 per cent renewal at each shop-



Outside Material Storage at Decatur

ping. These include valve rings, cylinder packing rings, grates, grate fingers, back and front end main rod brass, piston and valve bull rings, driving box brass (except main), and tank hose.

Still other items are known to be subject to about 25 per cent renewal at each shopping. Those include valve bushings, certain air pump parts, cushions, engine and trailer truck brass, arch tubes, boiler check valves, crank pins, and boiler lagging. We also know what mechanical appliances and specialties are installed on each class of power, and the average replacements required during a shopping. With this information and the co-operation obtained from the mechanical department, it is not a difficult problem to have material by the time it is required, to get it just about as needed, and to avoid unnecessary investment in material. Material is seldom left over from these programs.

Step up Regulation and Control

The general store is at Decatur, Ill., and division stores or other distribution points have been eliminated. The general store is centrally located, geographically, and is situated where the main locomotive and car shops are

maintained. Decatur is also the scrap concentration point, the location of the reclamation plant and the signal repair shop. Roadway equipment is also repaired at this point.

One objective in operating the stores is to have stocks in as few places as possible, and to centralize their regulation. All surplus or inactive material is returned to, or disposed of through the general store and obsolete material is disposed of currently.

The control of the investment in material is a problem of regulating effectively the supply or stock on hand to meet the demands or issues. As the stores department holds the reins which regulate the supply to be received, it is necessary to determine from all available sources what the requirements will be. A stock book reveals the past consumption, and is a guide for ordering material, especially for maintenance purposes, although it neither anticipates requirements nor forecasts business conditions. Material is ordered for and furnished to the using departments on the basis of actual requirements, so far as possible. Deliveries, or shipments, are regulated so as to be available as needed, and all orders specify delivery as directed in-so-far as the nature of the material will permit.

Store stocks, other than those at the general store, and fuel, rail, ties and commissary, consist of maintenance of way line stock, 18 emergency stocks, 10 stocks at terminals where storekeepers are in charge, stocks at 10 non-storekeeper points, and 32 working stocks. A stock balance is maintained for each stock by points, except line stocks, and shows the value of stock on hand, the receipts and the issues. This information affords a common yardstick on stock performance. It is necessary information, especially from a stock regulation standpoint. Yet the cost of this record is negligible as it requires only part of one clerk's time under the practice in effect on the Wabash of pricing all material from bins as the material is issued instead of from price books in the office.

Line Stocks Restricted

Maintenance of way line stocks are restricted to material necessary for current requirements. Emergency stocks are located at strategic points for protection and consist of frogs, switches and parts, bridge timber, and piling. These stocks are determined by the chief engineer and the general storekeeper, and are maintained by the stores department at points where storekeepers are located. At other points, they are maintained by division engineers or other officers, and are checked periodically by the stores department. This practice reduces the duplication of reserve stocks held for protection and maintenance.

Material in charge of storekeepers and material stored at points where no storekeepers are employed is regulated on the basis of that necessary for current requirements, and for protection. These stocks are replenished by shipments in cars which operate on regular schedules. In maintaining stocks at the outside points, special consideration is given to changes in the assignment of power, the seasonable nature of work being done, and appropriations of various departments. The same situation applies to working stocks.

IN CONNECTION WITH ITEMS published from time to time about women bossing railways, a reader calls attention to the Bowdon railway of which Mrs. J. L. Lovvorn is president, and Mrs. O. P. Barr is manager and treasurer, both with headquarters at Bowdon, Ga.

NEWS

Wheeler Suggests Fewer I. C. C.'ers

Would create smaller body for appeals; plans bill to speed revamps

Expressing his personal opinion that the Interstate Commerce Commission should be so reorganized that a smaller body of commissioners render final decisions on important appeal cases while the work in trial divisions be carried on by staff members of a subordinate status, Chairman Burton K. Wheeler of the Senate Interstate Commerce committee recommended such changes in the I. C. C. set-up together with bills to speed up reorganizations of bankrupt carriers and establish standards for financing practices, in a speech before the traffic division of the Buffalo (N. Y.) Chamber of Commerce on January 30. In discussing reorganization of the Commission, the senator made it clear that he has "no unalterable opinion on this point and no desire whatever to be dogmatic," and that he would support any plan that would protect the public and the different types of transportation media. It was his own belief, however, that the present procedure whereby all of the 11 commissioners participate in appeal cases in addition to work by each in the lower divisions of the Commission obstructs efficiency, and that in substitution therefor the body be composed of "fewer commissioners who would have the direction of all the work and who would hear only important appeals." Under this plan, the work of the lower divisions would be carried on by others of a subordinate status.

As for the railroad problem specifically, Senator Wheeler noted that he is planning to draft a bill to speed up railroad reorganizations which, among other aims, would seek to "eliminate certain objectionable provisions of the present railroad reorganization statute." In illustration, he cited complaints received by his senate committee that under the present law, the owners of "worthless securities" are able to exercise a strangle-hold over reorganizations and demand favored treatment before they permit reorganization. "It is obvious that we must correct this statutory defect, hastily enacted six years ago, when the chairman of the Senate Judiciary committee himself warned that there had not been time for adequate study of the bill."

Asserting that the roads are burdened by an "unbalanced type of capitalization," represented by heavy bonded debt, and that

"too many reorganizations have in the past been merely the advance agents of future receiverships," the senator urged that Congress establish minimum standards for railroad reorganizations and "break the sequence of events which has made the annals of railroad finance seem like a mere hop, skip, and jump from insolvency to insolvency." Such a bill is now in preparation, he added.

Believing that "a railroad ought to concern itself with the transportation business, and not the business of buying securities in the market or other outside undertakings," Chairman Wheeler was hopeful that, after conference with other agencies of the government, a bill can be introduced which will provide regulation of "such adventures," prevent railroad directorates from "plunging in the market" and save "their competitors, who would prefer to avoid such adventures, from following the leader in supposed or real defense of their own interests."

Status of R. F. C. Rail Loans

The monthly statement of the Reconstruction Finance Corporation as of January 26, shows disbursements to railroads (including receivers) of \$625,100,661 and repayments of \$189,006,674.

U. S. Chamber Annual Meeting

The twenty-seventh annual meeting of the Chamber of Commerce of the United States will be held in Washington, D. C. May 1 to 4, according to announcements issued this week.

Reed and Cook Confirmed

The Senate on January 28 confirmed President Roosevelt's appointments of Mr. Roland Reed to the Railroad Retirement Board and George A. Cook to the National Mediation Board. The five-year term of the former, who succeeded James A. Dailey as the Retirement Board's "railroad" member, will expire August 29, 1943. Mr. Cook, a former secretary of the Mediation Board who succeeded to the membership of the late James W. Carmalt, will serve a term expiring February 1, 1942.

K. C. S. Magazine Discontinued

Publication of the Kansas City Southern magazine is discontinued with the current issue. The magazine had its beginning in 1923, when the first of several monthly departmental bulletins was issued. These were consolidated into the magazine in May, 1928. In 1930, the publication was changed from monthly to bi-monthly and in 1931 to quarterly.

Hearing on Amlie Set for February 6

Senate sub-committee will look over President's nominee for the I. C. C.

Hearings on President Roosevelt's appointment of Thomas R. Amlie to the Interstate Commerce Commission will open on February 6 before a sub-committee of the Senate interstate commerce committee headed by Senator Johnson, Democrat of Colorado. Mr. Amlie has accepted Senator Johnson's invitation to appear, stating that he will be on hand for the hearing's opening session. By the evening of February 1, the sub-committee had received only two requests for assignments of time—one from Judge Henry A. Soffer of the Adolescents' Court, New York City, and the other from William H. Shenners, Jr., executive secretary of the Democratic Central Committee, Madison, Wis. Also, at that time, the commendatory letters and telegrams received by the sub-committee exceeded the protests.

Other members of the sub-committee, which was named on January 27, are: Senators Hill of Alabama and Schwartz of Wyoming, Democrats; and Senators Austin of Vermont and Reed of Kansas, Republicans.

Meanwhile the furor over the Amlie appointment has continued with additional attacks and defenses in the House of Representatives, and discussions in editorials and political columns. President Roosevelt said at his January 27 press conference that he had received no request for a conference with William D. Carroll, chairman of the Wisconsin Democratic State Central Committee, who has denounced the appointment; nor did the President have any comment on the action of the Wisconsin legislature in passing resolutions calling for a withdrawal of Mr. Amlie's name.

In the House on January 26, Representative Bolles, Republican, who represents the Wisconsin district formerly represented by Mr. Amlie, found himself unable to remain silent in the face of an appointment to the I. C. C. of one "who is committed not only to public ownership of transportation lines, but to revolutionary changes in the government which would put us on a plane with a Marxian Socialist government, did he have his way." "This I. C. C.," Mr. Bolles went on, "believes in privately owned lines. Mr. Amlie does not believe

(Continued on page 245)

Grand Circle Fares To 1939's Fairs

Low rates for journey to both
the New York and the San
Francisco expositions

"Sensationally low 'grand-circle' railroad fares," affording an opportunity to see both the New York and the San Francisco world's fairs, as well as to visit many points of scenic interest throughout the country, will be inaugurated on April 28, J. J. Pelley, president of the Association of American Railroads, announced on January 31. The new grand-circle fares are the first of their kind in the history of American railroads and represent a "substantial reduction" from standard rates.

Under the plan an individual can purchase a grand-circle coach ticket for \$90, or a first-class ticket for \$135 plus the regular sleeping or parlor car charges for space occupied. These fares apply from all cities and towns in the United States.

Purchasers of grand-circle tickets may travel from their homes to the World's Fair at New York, thence to the Golden Gate International Exposition at San Francisco and back to the starting point, without retracing of routes. Or the traveler may go to the Pacific Coast first, thence to New York and return to the starting point. Moreover, without extra cost, a choice may be made of many routes, and stop-over privileges at all points will be allowed in both directions. Baggage will be checked as usual.

"The manner in which the plan operates can be seen from one illustration," declared Mr. Pelley. "A person residing in Dallas can go from this Texas city to the San Francisco exposition, cross the continent, take in the New York World's Fair and return to his home, having stopped off to see many of America's scenic wonders—all at a transportation cost as low as \$90. On these grand-circle trips, passengers will travel from 6300 to more than 8000 miles by rail, depending on the starting point and the route selected."

Grand-circle tickets will go on sale April 28, and can be purchased until October 28, 1939, Mr. Pelley said. They will be good for two months from date of issuance. In addition to these grand-circle tickets, special round-trip fares to each of the two expositions will be offered by all the railroads, Mr. Pelley added.

King Offers Bill to Trim I. C. C. Powers

Senator King, Democrat of Utah, has introduced in the Senate S. 1132, a bill which would reduce the number of Interstate Commerce Commissioners from 11 to 5 and drastically curtail the Commission's power over the operating affairs of carriers. The bill would, in effect, remove from the Commission all control of operating matters, including rate-making and the power to prohibit abandonments or establishment of new lines. Thus leaving the Commission as a quasi-judicial agency for the hearing of complaints as to discrimination and unfair practices.

Briefly, the bill provides that after the expiration of 180 days after the date of enactment, the powers, duties and functions of the Commission under part I of the Interstate Commerce Act, with respect to the following matters, shall cease:

(1) The initiation by the Commission of investigations, other than those relating to the installation, use, or maintenance of safety devices and systems.

(2) The issuance of certificates of present or future public convenience and necessity with respect to the extension by a

N.O.I. for 1938 Was \$372,846,314

1.43 per cent return compares
with 2.27 per cent in
previous year

Class I railroads in 1938 had a net railway operating income of \$372,846,314, or a return of 1.43 per cent on their property investment, according to the Bureau of Railway Economics of the Association of

CLASS I RAILROADS—UNITED STATES
Twelve Months Ended December 31, 1938

	1938	1937	1930
Total operating revenues.....	\$3,565,490,883	\$4,166,068,601	\$5,280,234,535
Total operating expenses.....	2,722,228,767	3,119,064,932	3,931,043,991
Taxes.....	340,779,784	325,665,199	348,536,962
Net railway operating income.....	372,846,314	590,203,896	868,719,483
Operating ratio—per cent.....	76.35	74.87	74.45
Rate of return on property investment.....	1.43	2.27	3.36

	Month of December	1937	1930
Total operating revenues.....	\$318,336,254	\$300,320,822	\$373,652,000
Total operating expenses.....	232,703,859	243,354,701	294,575,875
Taxes.....	26,616,042	21,061,046	19,891,622
Net railway operating income.....	49,373,177	25,994,857	48,505,431
Operating ratio—per cent.....	73.10	81.03	78.84
Rate of return on property investment.....	2.67	1.41	3.06

railroad of any line. The construction of a new line, or the abandonment of a line or portion thereof.

(3) The ordering of any carrier to construct, maintain, and operate switch connections, with any lateral, branch line, or private sidetrack.

(4) The determination and prescribing of any rate to be observed by a railroad, or any classification, regulation, or practice affecting any rate, to be followed by any railroad, in connection with the transportation of passengers or property.

(5) The suspension of the operation of any new schedule of rates, fares or charges, or any new classification, or any new regulation or practice affecting any rate, fare, or charge, or deferring the use of any such rate, fare, charge, classification, regulation, or practice.

(6) The issuance and use of common carriers of scrip or interchangeable mileage tickets.

(7) The granting of authority for any person to hold the position of officer or director of more than one common carrier.

(8) The routing of traffic.

While the Commission would be denied the power to determine or prescribe either passenger or freight rates by any common carrier, it would be authorized to hold hearings for the purpose of determining whether any rate or regulation adopted by a carrier was unjust or unreasonable or discriminatory.

The present Commission of 11 members would be reduced to five members. With the provision that each commissioner in office on the date of the Bill's enactment would remain in office until June 1, 1939, or until such time as his successor was appointed. The new commissioners would receive \$12,000 a year, and the term would be seven years. No person having any pecuniary interest in any carrier coming under the jurisdiction of the Act could serve as a commissioner.

American Railroads. In 1937 the net was \$590,203,896 or 2.27 per cent, and in 1930 it was \$868,719,483 or 3.36 per cent.

Gross operating revenues in 1938 totaled \$3,565,490,883 compared with \$4,166,068,601 in 1937, and \$5,280,234,535 in 1930 a decrease of 14.4 per cent in 1938 below 1937, and 32.5 per cent below 1930. Operating expenses in 1938 amounted to \$2,722,228,767 compared with \$3,119,064,932 in 1937, and \$3,931,043,991 in 1930—12.7 per cent less than in 1937 and 30.8 per cent below 1930.

Class I roads in 1938 accrued \$340,779,784 in taxes compared with \$325,665,199 in 1937, and \$348,536,962 in 1930. For December alone, tax accruals amounted to \$26,616,042, an increase of \$5,554,996 or 26.4 per cent above December, 1937. Thirty Class I roads failed to earn expenses and taxes in 1938, of which 12 were in the Eastern district, four in the Southern district and 14 in the Western district.

The December, 1938, net was \$49,373,177, or 2.67 per cent; in December, 1937, it was \$25,994,857 or 1.41 per cent, and in December, 1930, it was \$48,505,431 or 3.06 per cent. Gross for December amounted to \$318,336,254 compared with \$300,320,822 in December, 1937, and \$373,652,000 in December 1930; operating expenses totaled \$232,703,859 compared with \$243,354,701 in the same month in 1937, and \$294,575,875 in December, 1930.

Class I roads in the Eastern district in 1938 had a net railway operating income of \$195,126,199 which was a return of 1.60 per cent. In 1937, their net was \$333,062,664 or 2.75 per cent and in 1930 it was \$438,492,623 or 3.75 per cent. Gross in the Eastern district in 1938 totaled \$1,685,400,527, a decrease of 19.3 per cent compared with 1937, and a decrease of 35.7 per cent compared with 1930; operating expenses totaled \$1,262,487,054, a decrease of 16 per cent below 1937, and a decrease of 35.4 per cent below 1930. The Eastern

(Continued on page 245)

R. R. Coordination Urged by Eastman

Decries waste and says that gov't propulsion and compulsion is needed

Declaring that the elimination of duplication and waste in the railroad industry can be achieved by consolidation and coordination, Interstate Commerce Commissioner Joseph B. Eastman told the members of the City Club of Rochester, N. Y., on January 28 that this can only be accomplished through some form of government propulsion or compulsion because of the "conflicts in interests and in personalities and policies."

In applying both of the methods, he asserted, protection of displaced employees against undue hardship will be necessary, but fortunately it appears that the managements and the employees are in agreement on this principle.

Discussing the conclusion that the impetus to the consolidation and coordination movement must be supplied by the government, the former Co-ordinator declared that "The public interest is involved, and there is no agency, save the government, which represents that interest and can bring influence to bear on the railroads which is wholly impartial, so far as their conflicting interests are concerned. Much can be done by the government, I think, merely by active promotion with the railroads of plans for the consolidation or co-ordination, but it may prove, as in Great Britain, that some measure of compulsion will be required."

Mr. Eastman would set up a governmental agency for such planning and promotional work which would be separate and distinct from the commission, which, he pointed out, is a quasi-judicial tribunal engaged in regulation. Also, Commissioner Eastman does not believe that the work of the new agency need be confined to railroad consolidation and coordination. "There is plenty of opportunity," he continued, "for the planning and promoting of co-ordination between the various forms of transportation. It is, in fact, a problem on which the attention of the world is concentrated. In the past few years, I have had talks with men from England, France, Germany, Italy, Denmark, the Argentine, Japan, Australia, and India all of whom were studying that question; and Northern Ireland is not the only country where active experiments in the coordination of road and rail transport are under way. Difficult as the problem is, I am nevertheless persuaded that there are great opportunities for such coordination, and that in the proper integration of our transport agencies lies the best hope for our transportation future."

Commenting on the subject of regulation, Mr. Eastman said that the commission now has the power to fix both maximum and minimum rates for both railroads and motor carriers and the Maritime Commission has somewhat similar powers with respect to coastal and intercoastal water carriers. "It may surprise you to know, however, that already we have prescribed

minimum rates much more extensively for motor carriers than has ever been done for railroads, and I am sure, also, that we have suspended reductions in motor carrier rates on protest of railroads more often than we have suspended reductions in railroad rates on protest of motor carriers," he told his hearers.

Continuing, he asserted that "There are competitive rate situations between the two forms of transportation which call for further intervention, but our present powers are sufficient for this purpose. We can and will give attention to these situations, and the results will be beneficial. I know of no reason, however, why they should be more beneficial to the railroads than to the motor carriers, if regulation is impartially applied, for neither group has a monopoly of destructive rate cutting."

New C. & N. W. Traffic Office in Washington

The Chicago & North Western has opened a new traffic office in Washington, D. C.—Suite 723 Woodward Building, Fifteenth and H streets, N. W. General Agent C. A. Miller is in charge.

"Perfect Shipping and Handling" Month

Following the success of the campaign conducted in April, 1937 and 1938, Regional Shippers Advisory Board in co-operation with the railroads, will conduct "a perfect shipping and careful handling" month in April, 1939.

N. I. T. League Special Meeting February 23

The National Industrial Traffic League's special meeting to consider Congressman Lea's omnibus transportation bill and other transport legislation proposals will be held at the Washington Hotel, Washington, D. C. on February 23.

A. T. A. Pamphlet

American Trucking Associations, Inc., has issued a pamphlet entitled "Let 'Em Roll" which has been described by the Association as the beginning of an active defense of its "young but gigantic industry." The pamphlet is designed to emphasize motor transport's role, among others, as "the Twentieth Century's answer to industry's prayer for safe, swift and cheap transport direct from producer to retailer and consumer."

Rock Island Installs Teletype System

In order to facilitate the movement of freight trains through terminals and to provide quick information to patrons in locating shipments, the Chicago, Rock Island & Pacific has installed a teletype system which provides inter-station communication through machines located at Herington, Kans., Kansas City, Silvis, Ill., Burr Oak, and relay stations at various points on the system and at the general offices at Chicago. The system is devoted entirely to the handling of information relative to the movement of freight trains and is an addition to the Rock Island's teletype message system.

New Truck Rules Are Promulgated

I.C.C. reduces 20-minute rule to 10 and will permit 12 hours in bad weather

After rehearing and reargument in the motor hours of service case the Interstate Commerce Commission has issued a further report in which it denies most of the relief asked for by the trucking industry, but makes two modifications, one changing the so-called 20-minute rule to a 10-minute rule and permitting drivers to remain on duty 12 hours instead of 10 when bad weather or traffic conditions prevail over a given route. The original decision of the commission was reviewed in the *Railway Age* for July 30. The effective date of that order was postponed, and the case reopened "with reluctance" in response to petitions for rehearing.

In the original regulations the commission required that any interval not in excess of 20 minutes in which a driver is on duty but not on a moving vehicle, be included in driving time. In its decision the commission says that the evidence on this point submitted at the rehearing was directed to showing that many carriers are engaged in transporting property in less than truckload lots from large centers of distribution to towns and villages within the trading areas of the larger cities. These carriers, it points out, make many stops for the purpose of delivering merchandise to retail stores, and the contention was made that if the time consumed in making these retail deliveries was included in driving time their runs could not be completed within the daily maximum.

Upon a reconsideration of this question the commission decided that a stop not in excess of 10 minutes in duration is insufficient to relieve a driver from the fatigue of driving, to the extent at least that such stops need not be included in driving time. The result of the changed rule is that hereafter all stops in excess of 10 minutes will not be included in the time a driver is on active duty.

On the subject of the daily maximum number of hours of driving to be permitted, the truckers contended upon rehearing that if the 10-hour maximum was adhered to, they were given three alternatives:

(1) To increase the speed of motor vehicles, so far as practicable, from a maximum speed of approximately 40 miles an hour and an average speed of approximately 25 miles an hour on runs of approximately 250 miles to a maximum speed in excess of 45 miles an hour and an average speed of approximately 30 miles an hour;

(2) To establish division points and employ additional drivers to relieve the regular drivers at the end of a 10-hour period; or

(3) To abandon such operations. After reconsidering the evidence, the commission concludes that "it is safer under adverse weather and traffic conditions for a driver to drive or operate a motor vehicle for 12 hours at a low rate of speed

than attempt to cover the same distance in 10 hours of driving at a higher speed." Following this line of reasoning, the 10-hour rule will be changed to a 12-hour rule only when the driver is confronted with adverse weather or traffic conditions.

To prevent abuse of this modified rule, the commission will require each carrier to report immediately to the district office of the Bureau of Motor Carriers in the district in which the principal office of the carrier is located, each instance in which a driver is required or permitted to drive or operate a motor vehicle for more than 10 hours and not more than 12 hours in any 24-hour period, and to state the reason for such longer period of driving.

The commission goes on to say that within the course of a year a study of these reports will show how frequently this longer period of driving is required and whether undue use is being made of the provision. "These data will be correlated with the accident reports which carriers are now filing in accordance with the safety regulations prescribed in our order of December 23, 1936," says the decision. "We shall then," continues the report, "be in a position to determine not only how prevalent the longer hours are, but the effect, if any, upon safety."

On the subject of drivers' logs, the commission concludes that the same reasons for exempting carriers engaged in mass transportation from the duty of maintaining the driver's log apply with equal force to the transportation of property wholly within a municipality or contiguous municipalities.

The commission refused to grant the plea of truckers in the oil well districts that they be granted a longer work week than 60 hours. Carriers of household goods also wanted relief from the 60-hour maximum, but the commission could see no reason for making an exception in their case. Representatives of department stores wanted relief from the rule for the three weeks prior to Christmas, but the commission felt that this problem could be solved by hiring additional drivers for that time.

The commission's original order of July 12, 1938, will be vacated and an order will be issued prescribing the new regulations effective March 1.

As noted in last week's issue the Bureau of Motor Carriers has recommended a revision of the motor carrier safety regulations, including more stringent physical examinations for all truck drivers. The Bureau recommended an overhauling of the existing regulations dealing with qualifications of drivers, driving of vehicles, parts and accessories, and reporting of accidents. The Bureau also proposed to enter a new field of regulation, that of inspection and maintenance of vehicles.

In the place of general terms used in the original rules regarding physical requirements to be met by drivers, the Bureau proposes specific language which is designed to tighten the regulations. As an example, drivers are now required to have "good eyesight," but the new rules would prescribe a specific standard which the driver must come up to. Every driver would have to pass a physical examination by a "qualified physician".

The proposed section on maintenance and

inspection would provide for the immediate repair of any known defect or damage to vehicles; a daily report by drivers to their employers concerning defects and damage; and a thorough inspection of vehicles each day before they are placed in service. In addition, inspections would have to be made at approximately every 2,000 miles, as well as about every three months.

These proposed regulations will be discussed at a hearing to be held before Commissioner Lee in Washington on February 16.

Yale Announces Transportation Fellowships

Yale University announces that its Committee on Transportation is again offering three \$500 fellowships for the academic year 1939-1940 for work in transportation at the Graduate School. A course of study is available for those specializing in the engineering aspects of transportation or the economic angle. Applications for the fellowships should be filed with the registrar of the Graduate School at New Haven, Conn., not later than March 1, 1939.

Stoker Order is Again Postponed

Acting upon the advice of its general counsel, the Interstate Commerce Commission has postponed from February 1, to March 1, the effective date of its order in the automatic stoker case. The reason given for the further postponement was that the commission was advised that the United States District Court for Northern Ohio had not rendered a decision on the application of several carriers for an injunction restraining the commission from enforcing its order.

Lehigh Valley's "Asa Packer" Inaugurated

A dedication ceremony for the inauguration of the Lehigh Valley's new train, the "Asa Packer," in service between Newark, N. J., and Mauch Chunk, Pa., was held in Bethlehem, Pa., on the afternoon of January 31, the train being operated from Newark to Mauch Chunk with a party of newspaper men on the day prior to its entry into revenue service. After a short talk on the life of Asa Packer, builder and first president of the Lehigh Valley and founder of Lehigh University, by Profes-

sor M. C. Stuart, of the University, Mrs. J. M. Gross, wife of a vice-president of the Bethlehem Steel Company, smashed a bottle of champagne against the "clean-lined" locomotive in traditional christening ceremony. Further details on the Asa Packer were published in the *Railway Age* of January 28, page 203.

Cotton Belt Speeds Up Trains

The St. Louis-Southwestern on February 5, will revise the schedules of several of its passenger trains, and will rename trains 1 and 2 operating between Memphis, Tenn., and Dallas, Tex., the "Lone Star." Suggestions are being received for a name for trains 5 and 6 operating between St. Louis, Mo., and Memphis. Train No. 1 will leave Memphis at 9:30 p. m. instead of 10:35 p. m., and will arrive in Dallas at 9:25 a. m. the next morning, instead of 11:59 a. m. Returning the train will operate on the present schedule.

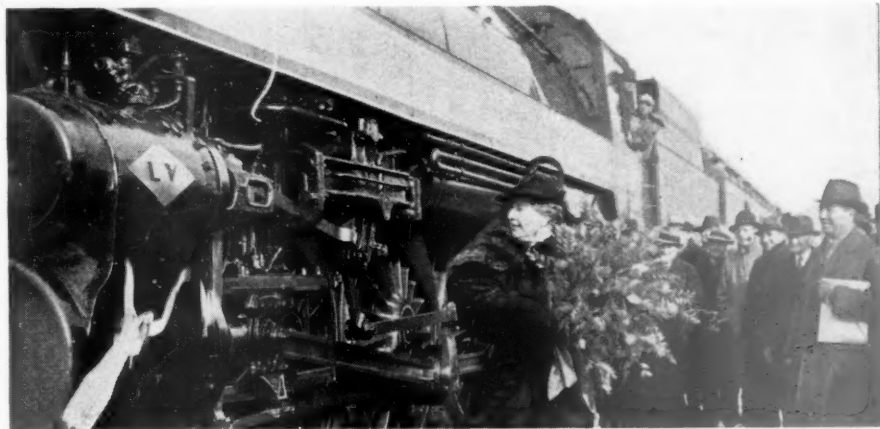
U. P. Opens Women's Department in Chicago

The Union Pacific opened a women's travel department in Chicago on February 1 with Miss Marion A. McKinney, a former Chicago high school teacher, in charge. The opening of the office in Chicago is part of the Union Pacific's program to encourage travel and to assist women patrons, who make up 60 to 70 per cent of the railroad's passengers. All types of travel information of interest to women will be made available to women at the new office.

Waterway Project Disapproved

The Board of Army Engineers has submitted to the House committee on rivers and harbors an adverse report on proposed improvements to the Illinois-Mississippi canal from the Illinois river at Bureau Junction to the Mississippi at Rock Island. The proposal was to maintain a nine-ft. channel by dredging and enlarging locks and reducing the number of locks.

The report recognizes that the canal's physical limitations make it inadequate for the needs of commercial traffic, but nevertheless finds that rehabilitation would entail costs "clearly in excess" of any potential savings on transportation. The finding is adverse to either reconstruction or con-



Mrs. J. M. Gross of Bethlehem, Pa., Christens the Lehigh Valley's New "Asa Packer" as President D. J. Kerr Looks On

tinued maintenance of the canal as a waterway. The chief of engineers recommended, however, that the right-of-way be retained by the government for possible future use. The average annual cost of maintaining the canal over the past 10 years has been \$173,750.

In another report on the Calumet-Sag channel, the army engineers favor the construction of a nine-ft. channel and a widening of the waterway to 160 ft., but stipulate that the government should pay for the reconstruction of all bridges involved. The estimated cost of this project is \$25,900,000.

N. Y. Commerce Body Opposes Rate-Making by Congress

Opposition to proposed legislation which allegedly would transfer certain rate-making authority from the Interstate Commerce Commission to Congress was expressed by the committee on internal trade and improvement of the Chamber of Commerce of the State of New York in a report issued on January 29. The report referred particularly to the Hill, Bankhead and McKellar bills now before the Senate which in substance would direct the I. C. C. to so regulate rates as to abolish certain regional or territorial differences in rate structures.

Status of Providence-Philadelphia Despatch

Following its recent decisions in the case involving the status of Acme Fast Freight, Inc., and in the Freight Forwarding Investigation, the Interstate Commerce Commission, Division 5, has found that the Providence-Philadelphia Despatch is neither a common nor a contract carrier by motor vehicle or a broker under the Motor Carrier Act. The applicant, which conducts forwarding operations over the New York, New Haven & Hartford and the Pennsylvania between Providence, R. I., and Philadelphia, Pa., had sought a broker's license in the event the commission found its operations to be those of a broker.

Service Records Relief Project

Senate and House conferees, working this week on the Emergency Relief Appropriation bill, eliminated the amendment which Senator McCarran, Democrat of Nevada, had inserted in the Senate version of the measure to provide that \$3,000,000 of the relief money be earmarked for the employment of unemployed railroad workers to bring up-to-date the Railroad Retirement Board's data on prior service records of railway employees.

There is nothing in the present law which precludes the use of W. P. A. funds for this purpose, but the Retirement Board's present project in that connection must be financed out of W. P. A. allotments received by the several states.

No Opposition Appears at Lehigh Valley Hearing

No opposition to the Lehigh Valley's voluntary capital readjustment program developed when a short hearing was held before the Interstate Commerce Commission

in Washington on January 31. E. H. Burgess, Lehigh Valley general solicitor, and Arthur F. Bayfield, comptroller, appeared and presented the case for the carrier. Bondholders, who have already made known their general support of the proposal, were represented by Littleton Groom.

Mr. Bayfield told the commission that as of January 28, holders of 83.22 per cent of the company's general consolidated bonds affected by the plan have assented to the proposal. Assents have also been received from 85.16 per cent of the Pennsylvania & New York Canal & Railroad bonds; 85.70 per cent of Lehigh Valley Rail Way $4\frac{1}{2}$ per cent bonds; and 91.13 per cent of the Lehigh Valley Terminal Railway bonds.

Mr. Bayfield also said that bank creditors of the company and the Reconstruction Finance Corporation have agreed to extend to February 15 the date by which the plan must be declared operative.

Slipping Tests to Feature N. Y. Railroad Club Meeting

T. V. Buckwalter, vice-president of the Timken Roller Bearing Company, Canton, Ohio, will present "Steam Locomotive Slipping Tests" before the New York Railroad Club, 33 West 39th street, New York, on Friday, February 17, at 7:45 p. m. The speaker will show motion pictures of driver contact with rails, illustrating the influence on high-speed vibrations of a reduction of one-half in reciprocating weight and two-thirds in overbalance. An ultra-fast camera operating at 400 frames per second was used during a portion of these tests, and slow motion projections illustrate the results of different combinations of driving wheel diameters and counterbalancing.

Court Upholds Right of Private Contract

The right of private contract between the Union Pacific and the Chicago, Milwaukee, St. Paul & Pacific and the Wabash for use of the former's terminal facilities at Omaha has been upheld by the federal district court at Omaha in the dismissal of a suit filed by the Interstate Commerce Commission, which claimed that the contract violated a regulation requiring that payment for short hauls be in accordance with published tariffs. The court ruled that neither I. C. C. regulations nor provisions of the Elkins act were violated by the contract under which the Milwaukee and Wabash pay \$1.10 per car for the use of the Union Pacific terminal facilities, although the amount is 85 cents more than the published tariff.

S. A. L. Gets Court Aid to Fight Commission Service Order

The Seaboard Air Line has obtained an injunction from Federal Judge Alexander Akerman to prevent its operating passenger trains No. 13 and 14 on the 199-mile run between Americus, Ga., and Savannah, on the line between Savannah and Montgomery, Ala. The railroad requested the injunction in order to stop an order of the Georgia Public Service Commission which would force the company to con-

tinue the two trains in operation. Both of the trains were removed from service in May, 1938, by permission of the commission, after investigation of operating losses therefrom, but as a result of public complaint the commission ordered them restored in August, 1938, following a new hearing.

Grade Crossing Accidents Decrease

A decrease in the number of accidents at highway-railroad grade crossings and in the number of casualties resulting therefrom took place in the first 10 months of 1938 compared with the corresponding period of 1937, according to the Safety Section of the Association of American Railroads.

Accidents at highway-railroad grade crossings in the first 10 months of 1938 totaled 2,669 compared with 3,585 in the same period of 1937. Fatalities resulting from these accidents totaled 1,159 in the 10 months' period of 1938 compared with 1,519 in the same period of the preceding year, or a decrease of 360, while persons injured numbered 3,081 in the 1938 period compared with 4,082 in the same period of the preceding year.

In the month of October alone, 329 highway-railroad grade crossing accidents occurred compared with 491 in October, 1937. As a result of these accidents 150 fatalities took place in October, 1938, a decrease of 64 compared with the same month of the preceding year, and 375 persons were injured in October, 1938, compared with 570 in the same month in 1937.

Advertising Agents Meet at Philadelphia

The annual meeting of the American Association of Railway Advertising Agents was held at Philadelphia, Pa., on January 20, at which the following officers were elected for the ensuing year: President, George T. Savage, advertising agent of the Illinois Central; first vice-president, R. E. Israel, advertising agent of the Central of New Jersey; vice-presidents, F. E. Heibel, advertising agent of the New York, Chicago & St. Louis; R. W. Jennings, advertising agent of the Chicago, Burlington & Quincy; C. P. Moore, advertising agent of the Union Pacific and R. A. Willier, general advertising agent of the Wabash; treasurer, E. A. Mitchell, of the advertising department of the Atchison, Topeka & Santa Fe and secretary, E. A. Abbott, of Poole Bros., Inc.

At a midday luncheon the guests were passenger traffic officers of the Pennsylvania and the Reading. Following the meeting the members made a special preview of the New York World's Fair. In the evening of the same day a banquet was tendered the members and their wives by the officers of the Official Railway Guide. Speakers included Thomas M. Keresey, vice-president of Lord & Thomas, and Garth Cate, resort and travel promotion manager of the New York World-Telegram.

Freight Car Loading

Revenue freight carloading for the week ended January 28 totaled 594,379 cars, the Association of American Railroads an-

nounced on February 2. This was an increase of 4,020 cars or 0.7 per cent over the previous week, 41,203 cars or 7.4 per cent above the corresponding week of 1938, and a decrease of 58,643 cars, or 9 per cent, below the corresponding week in 1937.

As reported in last week's issue the loadings for the previous week ended January 21, totaled 590,359 cars, and the summary for that week, as compiled by the Car Service Division, A. A. R. follows:

Revenue Freight Car Loadings

For Week Ended Saturday, January 21			
Districts	1939	1938	1937
Eastern	133,523	124,201	151,137
Allegheny	112,141	103,832	139,801
Pocahontas	42,415	39,244	48,259
Southern	91,948	91,362	97,942
Northwestern	69,864	68,796	75,792
Central Western	94,706	93,637	101,419
Southwestern	45,762	49,161	50,996
Total Western Districts	210,332	211,594	228,207
Total All Roads	590,359	570,233	665,346
Commodities			
Grain and Grain Products	33,029	36,096	29,514
Live Stock	13,839	15,579	12,746
Coal	131,383	125,097	154,112
Coke	7,663	6,720	12,173
Forest Products	27,240	27,280	30,133
Ore	8,964	7,158	9,972
Merchandise l.c.l.	146,586	145,526	158,677
Miscellaneous	221,655	206,777	258,019
January 21	590,359	570,233	665,346
January 14	586,877	580,740	696,035
January 7	530,849	552,568	700,046
December 31	499,895	454,906	
December 24	574,462	457,821	
Cumulative Total, 3 Weeks	1,708,085	1,703,541	2,061,427

In Canada.—Car loadings for the week ended January 21 totaled 41,678 as compared with 40,402 in the previous week and 45,884 a year ago, according to the compilation of the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
January 21, 1939.....	41,678	23,148
January 14, 1939.....	40,402	23,312
January 7, 1939.....	35,664	21,076
January 22, 1938.....	45,884	24,497
Cumulative Totals for Canada:		
January 21, 1939.....	117,744	67,536
January 22, 1938.....	135,299	67,150
January 23, 1937.....	137,906	79,557

Mitchell Asks Reopening of "Jim Crow" Case

Arthur W. Mitchell, negro congressman from Chicago, Ill., has asked the Interstate Commerce Commission to reopen his case against the Chicago, Rock Island & Pacific and the Pullman Company alleging discrimination against colored passengers for rehearing and reargument. Congressman Mitchell asserted in his brief that the commission had "obviously" overlooked certain decisions of the federal courts and certain statutes when it handed down its recent decision dismissing his complaint.

In his original complaint the negro congressman claimed that he had been discriminated against in that he had purchased a first class ticket from Chicago to Hot Springs, Ark., but that upon entering the state of Arkansas he was refused permission to ride in a Pullman car.

Equipment Installed in 1938

Class I railroads of the United States in 1938 installed 18,517 new freight cars in

service, according to complete reports for the year made public on January 23 by the Association of American Railroads. This was a decrease of 56,541 compared with the number of such installations in 1937 and a decrease of 25,424 compared with 1936. Class I roads also put in service 164 new steam locomotives in 1938, compared with 373 in 1937 and 87 in 1936; new electric and Diesel-electric locomotives installed in 1938 totaled 118 compared with 77 in 1937 and 34 in 1936.

The 1938 installations of new freight cars included: Coal, 5,195; box, including both plain and automobile, 10,530; refrigerator, 43; flat, 1,529; stock, 496; and miscellaneous, 724.

New freight cars on order on January 1, this year, totaled 5,080 compared with 4,335 on December 1, 1938, and 7,947 on January 1, 1938. New steam locomotives on order on January 1, totaled 30 compared with 17 on December 1, 1938, and 131 on January 1, 1938. New electric and Diesel-electric locomotives on order at the beginning of this year totaled 41 contrasted with 39 on December 1, last, and 30 at the beginning of 1938.

New freight cars and locomotives leased or otherwise acquired are not included in the above figures.

Medal of Honor for R. S. Elrod, Southern Fireman

President Roosevelt has awarded a medal of honor to Robert S. Elrod of Atlanta, Ga., a Southern Railway fireman, who was thus cited for his heroism in rescuing Engineer Robert L. Grenshaw from a steam-filled locomotive cab, following an accident at Courtenay, S. C., on September 3, 1937. The award was made under the Medals of Honor Act of 1905 upon recommendation of the Committee on Awards of Medals of Honor, approved by the Interstate Commerce Commission.

The act provides for bronze medals to be awarded for outstanding feats of bravery in connection with the saving of life on railroads; 45 such medals have thus far been awarded, including Fireman Elrod's. The accident involved was a collision which derailed the locomotive on which Mr. Elrod was the fireman and Mr. Grenshaw the engineer, breaking practically all steam connections. Fireman Elrod, after escaping from the steam-filled cab through the ventilator in the roof remained to pull Engineer Grenshaw to safety. In doing so, the I. C. C. announcement says, Mr. Elrod "received severe burns which covered about 27 per cent of his body and he suffered about 25 per cent permanent partial disability." He was hospitalized for five weeks, and it was nine months before he was able to return to duty as fireman "on stoker-fired engines."

S. A. L. Inaugurates All-Coach Train "Silver Meteor"

At 11:45 a. m., February 2, at the new New York World's Fair station of the Long Island and Pennsylvania, "The Girl of Tomorrow," representing the spirit of the fair, formally christened the Seaboard Air Line's new seven-car, stainless-steel, chair-car train, the "Silver Meteor," be-

fore representatives of the fair, government and industry, including Grover Whalen, president of the fair; R. K. Evans, vice-president in charge of Diesel development, General Motors Corporation; F. H. Prescott, vice-president and general manager, Electro-Motive Corporation; E. G. Budd, president, Edward G. Budd Manufacturing Company; L. R. Powell, Jr., and H. W. Anderson, receivers of the Seaboard Air Line and other officers of the road. Following the dedication ceremonies, the new streamliner was hauled by a Pennsylvania electric locomotive through the East river tunnels to Pennsylvania station, New York, whence it departed at 3:30 p. m. on its inaugural run to Florida points.

All 280 revenue seats of the Silver Meteor have been sold out for the first four trips southward with destinations alternating between east and west coast resorts, according to the road's passenger department. The train was publicly exhibited at Pennsylvania station, New York on February 1, from 10 a. m. to 2 p. m. Further details of the train were presented in the *Railway Age* for January 21, page 170.

Wheeler to Ask for I. C. C. Study of Hastings' Plan

Senator Wheeler is preparing to introduce in the Senate a joint resolution directing the Interstate Commerce Commission to make a study of the Hastings "postalized" rate plan, it was learned this week. The commission recently requested such a mandate from the Congress before it undertook such a survey.

On January 28 John A. Hastings, proponent of the plan, issued a statement in which he asserted that "An analysis and breakdown of full passenger-coach operating costs, not including taxes and interest, discloses the startling fact that the cost of moving a seat in a passenger coach one mile is $\frac{33\frac{1}{2}}{1000}$ of a cent, or less than one-third of a cent a mile. This is, so to speak, the manufacturing cost of this particular unit. The coach seat-mile is one of the products which railroads offer for sale to the traveling public."

Mr. Hastings went on to point out that for a period of over 12 years from 1921 to and including 1933, the Class I railroads placed a sales price on this service of 3.6 cents per mile. This, he said, represented an attempt on the part of the carriers, in a market which had become competitive, to exact a price 11 times greater than the production cost. The result, according to Mr. Hastings' computation, was a loss of almost \$5,000,000,000 of passenger revenue during this period. Mr. Hastings then asked what would become of an automobile manufacturer who tried to sell a car costing \$332 to manufacture for \$3,600.

Concluding his statement, Mr. Hastings said that "in October 1938, which is the last month for which the Interstate Commerce Commission's statistics are available, the average journey of coach passengers, excluding commutation, on Class I railroads was 47.8 miles per railroad system. I have stepped up the average coach journey under the postalized fare to 125 miles per postalized region. This is, in my opinion, a most liberal estimate. This computation increases the haul of the aver-

age journey per coach passenger 175 per cent over that which obtained in October, 1938. This average journey purchased at \$1 will yield to the railroads an average of eight mills per mile, or aggregate coach earnings of \$251,000,000 annually, providing for an ample surplus to meet taxes and interest, reserves for improvement, modernization and replacements and dividends to stockholders, in the place of an operating deficit from all passenger service of almost \$100,000,000 last year. By postalizing railroad rates, we shall put the railroads upon a profitable basis and rehabilitate the economy of the nation."

Later, Mr. Hastings issued a statement in which he congratulated J. J. Pelley, president of the Association of American Railroads, on the railroads' decision to put into effect the "grand circle tours" for the New York and San Francisco fairs, seeing in this action an adoption by the railroads of the principle of postalization of passenger fares.

N. Y. Railroads Must Note Low Clearances in Rule Books

The New York Public Service Commission has ordered railroads in the state to include in their rules and regulations a description of all overhead clearances less than 21 ft. 6 in., together with their location and an accompanying warning to employees regarding care during train movements under or near such bridges or structures. In connection with the proceeding instituted by the commission to investigate riding by railroad employees on the top of moving trains, a representative of the Brotherhood of Railroad Trainmen urged the commission to issue an order to compel railroad officials to keep employees off the top of moving cars within low clearance zones. Not only did the railroads oppose the issuance of such an order but representatives of the other brotherhoods did not agree as to the desirability of such an order. Indeed, one of their representatives stated that the railroads and employees could better work out the problem by themselves. A list of some 974 over-head structures in the state were submitted with the statement that during the period 1933 to 1937, inclusive, three deaths and eight injuries were incurred by employees coming in contact with low structures.

The commission was of the opinion that there is no proof that any injury or death was caused by willful disregard of rules and regulations by any railroad official. The rule prescribed is merely to make a uniform regulation applicable to all railroad corporations of the state under the jurisdiction of the commission.

Rehabilitation Will Require Expenditure of \$2,000,000,000

The expenditure of approximately \$2,000,000,000 is necessary to replace and repair the railroads' equipment and bring the number of units up to the total of 1926, according to a statement made by Walter M. W. Splawn, member of the Interstate Commerce Commission, in an address before the Bankers Club of Chicago on January 31. "The rehabilitation of way and

equipment", he said "is more needed by some companies than by others. A large percentage of locomotives, passenger cars, and freight cars are in need of repair, modernization, or replacement. It is estimated that it will cost nearly \$2,000,000,000 to accomplish this end and bring the number of units up to 1926. If this were done, it is estimated that it would increase the capacity of the railroads 40 per cent above 1937 and 13 per cent above 1929. Obviously, this entire expenditure is not justified by the traffic now available. But, going from one company to another, one will find varying degrees of justification for such expenditures. Some companies can make such a good showing that they can repay loans for such a purpose.

"Again, the maintenance of way has by no means been uniform. Some companies have deferred maintenance of way to a much larger extent than others. Increase in maintenance of way would be of two kinds; first, by companies which would have to borrow some or all of the funds necessary and which could reasonably be expected to repay the loans; second, by other companies which could not make a good showing as to their ability to repay, but which must make some immediate repairs of way or else be threatened with much larger expenditures in the future."

Survey Shows 56,311 Miles of Runs Better Than 60 M. P. H.

Published timetables of railroads in Canada and the United States at the end of 1938 listed a total of 924 separate passenger runs involving 56,311 route-miles scheduled at an average start-to-stop speed of a-mile-a-minute or better, according to tables compiled by Donald M. Steffee published in the February issue of "Railroad Magazine," of New York. Of these, 864 runs, totaling 47,087 route-miles, are covered daily, while the remainder are covered on a weekly or several-days-a-week basis. This record compared with that publicized by the same magazine eleven months previously in March 1938, which showed 781 runs aggregating 46,242 miles, of which 38,532 were covered daily. This "greatest transportation speed-up in history," the magazine points out, has been pushed vigorously in spite of intense depression in railroad traffic and net revenues which might have excused an understandable tendency for the carriers "to let things slide along."

Reviewing the remarkable long-range increase in time-table passenger-train speeds, the article recalls that in 1928, with a few exceptions, no American trains were scheduled at 60 m.p.h. or better from start-to-stop. By 1930, the total of such runs reached some 1,100 miles. Then operating officers began to cut time and by the fall of 1936, the magazine was able to report a total of 644 runs, aggregating 40,205 miles (29,301 miles daily) covered at 60 per or better.

According to the survey, the Pennsylvania ranks first in the total daily mileage so operated. In fact, its 12,432 daily miles of mile-a-minute runs is the highest of any single railroad system in the world. The Atchison, Topeka & Santa Fe showed the largest increase in mileage of fast runs

during 1938, both numerically and proportionately, boosting its schedule runs of 60 m.p.h. from 2,941 miles at the close of 1937 to 7,063 at time of writing. Of the latter, 5,030 miles are accounted for by the "Super Chief" and "El Capitan" which run twice-a-week.

The article observes that the trend in timetable speed-ups is toward general overall reductions of time on the road rather than "brilliant bursts of high speed" and that while there have been no recent additions of new, spectacular high-speed runs, the speeds of scores of established trains have been "hiked up" to conform to the spectacular speed runs of the last few years.

The survey lists no runs of less than five miles and does not include the large number of trains which fall only a trifle short of mile-a-minute averages.

Beatty Speaks Before Canadian Industrial Traffic League

"The Long Struggle for Sanity" was the title of an address delivered at Hamilton, Ontario, last week by Sir Edward Beatty at the annual dinner of the Canadian Industrial Traffic League. His observations largely took the form of a review of suggestions that from time to time have been made towards solving Canada's railway problem.

"It is becoming quite well known in the country," said Sir Edward, "that the idea of running the transportation system of Canada so as to give the public transportation at the lowest cost is not some sort of a dirty trick of mine. It is now well known that it is not an attempt to use pleas for national economy in order to acquire the property of the Canadian National for predatory capitalists; that it is not a scheme to deprive half the communities of Canada of railway transportation; and that it is not an ingenious idea, as some of the less wise critics put it, to put thirty thousand men out of work."

"Canada," he said in conclusion, "cannot afford waste even if, for the moment, it can meet its bills or pay its losses. What a depression does is to expose our economic waste and our unsound policies. What prosperity does is to cover up both. Economic waste may continue even if it is concealed by our revenues. If, for example, the Canadian Pacific were owning and paying 10 per cent on its common stock, and if the Canadian National were earning and paying all its legitimate charges, the operations of the two companies in competition would still represent an economic loss of from \$50,000,000 to \$75,000,000 per year."

Wants to Legalize Management-Security-Holder Pacts

A suggestion that Congress pass a bill permitting railroad managements and a "substantial majority of their security holders" to effect plans modifying interest obligations and maturities against the opposition of minority security owners was put forth by J. J. Cornwell, general counsel, Baltimore & Ohio, in an address delivered before the Railway Club of Pittsburgh, Pa., on January 26. A plea for such legislation was first made public by

Mr. Cornwell in an interview reported by the Associated Press on December 28, at which time he asked for an act which would make legal an agreement between railroad managements and two-thirds of their bondholders, making receiverships proceedings impossible after the agreement is signed.

In the speech at hand, he expressed the opinion that such a measure would "protect the stockholders and the great savings institutions and insurance companies against the strike actions of a few small holders of securities who acquire them for hold-up purposes and the hi-jacking members of the legal profession who aid and abet them."

After pointing out that most of the ills suffered by the carriers may be laid to politicians, the speaker expressed indignation that, during the decline of railroad health, the same blameworthy politicians have carried on a war against the whole railroad industry "because of the alleged misdeeds of a few promoters or speculators who made money in real estate or stock speculation and broke into the railroad field. The halls of Congress and the radio broadcasting stations have resounded with denunciations of the railroads and railroad managers by the politicians who fostered unfair competition and then hamstringed the railroads in their regulations so they were not free to meet that competition."

December Truck Loadings 24.8 Per Cent Ahead of Previous Year

December, 1938, truck loadings were 5.08 per cent under November, 1938, but exceeded, for the fourth consecutive month, the loadings for the corresponding period of 1937, according to American Trucking Associations, Inc. The A. T. A. truck loadings index figure, based on the 1936 monthly average as 100, stood at 107.02 for December, 1938, compared with 117.37 in November, 1938, and 88.36 in December, 1937.

Comparable reports were received from 193 motor carriers in 40 states who transported an aggregate of 736,388 tons in December, 1938, as compared with 775,755 tons in November, 1938, and 590,008 tons in December, 1937. The volume of freight carried by trucks last month represented an increase of 24.80 per cent over the tonnage carried in December, 1937. The decrease under November, 1938, was attributed to seasonal trends in large traffic centers, accompanied by continued drivers' strikes in Omaha and eastern cities.

The only December gains over the preceding month were in the petroleum products and automobile classifications. The former showed an increase of 14.55 per cent over November and a 20.99 per cent increase over the corresponding month of 1937. Transporting of automobiles increased 9.37 per cent over November and 25.38 per cent over the volume of December, 1937. In the general merchandise class, which accounted for slightly more than 68 per cent of the total volume reported, the December figure was 7.26 per cent under November, but was 22.24 per cent over December, 1937. While transportation of iron and steel showed a decline of 7.40 per cent under the preceding

month, the December volume represented an increase of 125.6 per cent over December, 1937.

Rate Equality Fight Pressed in Both Houses

Several developments have taken place on Capitol Hill during the past week on the subject of freight rate equalization between Official Classification Territory on the one hand and the South and the West on the other. On the Senate side of the Capitol Senator Wheeler, Democrat of Montana and chairman of the Senate interstate commerce committee, announced the appointment of a subcommittee to hold hearings on several senate bills which would legislate an equality of rates between all sections of the country. The subcommittee will be composed of the following Senators: Hill, Democrat of Alabama, chairman; Andrews, Democrat of Florida; Lundeen, Farmer-Laborite of Minnesota; Gurney, Republican of South Dakota; and Tobey, Republican of New Hampshire.

On the House side, the West-South bloc which was organized recently to fight for equality of rates, met on January 27 and voted to demand that equalization of rates be written into the Administration's general railroad legislation program. Chairman Ramspeck, Democrat of Georgia, was instructed to ask for a date for a hearing by the House interstate and foreign commerce committee, which is now holding hearings on the Lea omnibus transport bill. About 75 Southern and Western representatives attended the bloc's second meeting.

At his January 31 press conference President Roosevelt was asked what attitude he was taking towards the House group's attempt to force action on their plea for an equalization of rates. He said that it was well known that he favored such action, but that he had not given it any thought recently. Asked if he would back a bill to achieve this result, the President said that he would first have to see the bill before he could say.

Club Meetings

The Central Railway Club of Buffalo will hold its "Freight Loss and Damage Prevention Night" on February 9, at 8 p. m., at the Hotel Statler, Buffalo, N. Y. A paper entitled "Co-operation in the Prevention of Loss and Damage to Freight" will be presented by Robert A. Fasold, special representative, freight claim division, Association of American Railroads, Chicago. An illustrated talk entitled "New Trends in Packing and Container Design" will be given by Edward Dahill, chief engineer, Freight Container Bureau, A. A. R., New York. James J. Hailey, traffic manager, Niagara Alkali Company, Niagara Falls, N. Y., will talk on "Prevention—Shippers and Receivers Responsibilities"; Frank G. Love, superintendent property protection, New York Central system, New York, on "Prevention from Railroad and Express Agency Standpoint"; and Harry L. Nancarrow, superintendent, Pennsylvania, Buffalo, N. Y., on "The Future."

The Car Department Association of St. Louis will hold its next meeting on Febru-

ary 21, at the Hotel Mayfair, St. Louis, Mo. D. R. Brown, Southern Wheel Company, will present a paper "Wheel Defects, Particularly those Defects Not Covered by A. A. R. Wheel Gauges;" and F. H. Hardin, president of the Association of Manufacturers of Chilled Car Wheels, will present a talking motion picture illustrating the manufacture of chilled car wheels and the test requirements prescribed and enforced by the Association Inspection department. A dinner will precede the meeting at 6:15 p. m.

The Railway Club of Greenville will hold its next meeting on February 16 at 6:30 p. m., in the Bessemer & Lake Erie shops, Greenville, Pa. G. S. Meek, president and general superintendent of the Pittsburgh & Conneaut Dock Company, will present "The Story of Unloading Iron Ore at Conneaut, Ohio."

The Northwest Car Men's Association will hold its next meeting on February 6, at 8 p. m., at 1931 University avenue, St. Paul, Minn. The Griffin Wheel Company will present a sound film entitled "The Story of the Chilled Car Wheel" and proposed changes in new A. A. R. rules will be discussed.

Early Reorganization Hoped for In Erie Case

Speedy action on the part of the Interstate Commerce Commission in expediting the reorganization of the Erie was indicated after a virtual agreement was reached between the representatives of various interests when hearings on the two plans were resumed in Washington, D. C., on January 30. It is the hope of the parties represented that the docket in the case can be kept small so that the reorganization can be expedited. It is also hoped that hearings can be concluded shortly so that an examiner can prepare a proposed report in the case.

A revised committee plan was filed with the commission which changes the proposed allocation to the Erie & Jersey Railroad first mortgage bonds from 109 per cent in new first consolidated mortgage series A, 4¾ per cent bonds to 109 per cent in new first consolidated, Series B, four per cent bonds. The New York, Lake Erie & Western dock and improvement 5s, under the new proposal, would be given 100 per cent in new first consolidated Bs.

The principal witness at the hearing was H. S. Sturgis, vice president of the First National Bank of New York and vice chairman of the refunding and improvement committee. His testimony dealt with changes proposed in the modified plan.

At the February 1 session, William Wyer, consulting engineer for the Chesapeake & Ohio, presented suggested modifications in the Erie's plan of reorganization which are designed to insure continued control of that road by the C. & O. The suggested amendments would make available for common stock dividends a larger amount than was provided in the plan filed by the debtor.

Mr. Wyer told the Commission that the C. & O. was opposed to the plan submitted by the first and refunding mortgage bondholders committee because of the provision providing for the purchase of stock through

warrants. To preserve the C. & O.'s equity, Mr. Weyer said, these warrants would have to be exercised which would not be a sound business investment in the opinion of officials of the company.

The hearings were adjourned on February 1, and the Commission set March 20 as the deadline for filing of briefs.

Wheeler and Lea Introduce Through-Routes Bills

Senator Wheeler, Democrat of Montana, has introduced in the Senate S. 1085, a bill to authorize the Interstate Commerce Commission to prescribe through routes and joint rates without reference to the short-hauling of any carrier. Representative Lea, Democrat of California, has introduced a companion bill in the House, H. R. 3400. A similar bill passed the Senate last session, but failed of enactment in the House.

Representative Bryson, Democrat of South Carolina, has offered another "equality freight rate bill", H. R. 3369, which would authorize the Interstate Commerce Commission to so revise the country's rate structure that there would be sectional and intersectional uniformity in rates.

Senator Mead, Democrat of New York and Representative Merritt, Democrat of New York, have introduced companion bills, S. 1034 and H. R. 3408, which would authorize the Secretary of War to terminate certain leases of the Long Island on property situated at the United States Army Base at Bay Ridge, Brooklyn, N. Y.

Representative Green, Democrat of Florida and Mansfield, Democrat of Texas, have introduced similar bills, H. R. 3222 and H. R. 3223, which would provide for the completion of the construction of the Atlantic-Gulf Ship Canal across Florida.

Representative Lesinski, Democrat of Michigan, has offered H. R. 1963, which would appropriate \$212,000 for the dredging of a channel in the Detroit River east of Grosse Isle and west of Stony Island.

Representative Daly, Democrat of Pennsylvania, has introduced H. R. 2304, a bill which would extend the commodities clause of the Interstate Commerce Act to the transportation of oil by pipe lines.

Meanwhile, the Senate committee on interstate commerce has voted favorable reports on two bills, S. 25, a bill introduced by Senator Truman, Democrat of Missouri, which would prohibit the operation of motor vehicles in interstate commerce by unlicensed operators, and S. 167, introduced by Senator Nye, Republican of North Dakota, which would amend Section 203 (b) (4b) of the Motor Carrier Act of 1935, so as to make the exemption therein provided for apply to federations of cooperative associations.

United States Supreme Court Decisions

Several cases of interest to the railroad industry were handed down by the United States Supreme Court at its January 30 meeting. In the case of the Inland Steel Company v. the United States, et al., the court, speaking through Justice Black, held that switching allowances set aside by the railroads in special funds, pending deci-

sion of the Interstate Commerce Commission in Ex Parte 104—Part II—Terminal Allowances, accumulating after the date of interlocutory injunctions restraining the enforcement of the commission's orders, belong to the railroads and not to the shippers. Justice Black held that even though these allowances were permitted by the tariffs, since the commission had held the tariff provisions to be unlawful, the allowances could not be collected by the shipper.

In another case of the Southern Pacific Company v. Gallagher, the court upheld the constitutionality of the California use tax insofar as it would tax material brought into the state of California by the Southern Pacific for use in what the company termed "interstate commerce." The tax was enacted to prevent companies from purchasing materials outside the state to avoid the payment of the state sales tax. The carrier contended that use tax was an unconstitutional burden on interstate commerce, but the court refused to uphold this contention.

In the cases of the United States v. Midstate Horticultural Company and the United States v. the Pennsylvania Railroad Company, the court, through Justice Black, held that the federal district court for the eastern district of Pennsylvania did not have jurisdiction of a criminal prosecution of the railroad and shippers for an alleged violation of the Elkins Act based upon indictments charging that rebates were paid and received in New York in 1935 in connection with the transportation of goods in 1932 from California through the eastern district of Pennsylvania to New Jersey, that the full lawful rate was paid when the transportation took place, and that prior to the time of the payment and receipt of the rebate the railroad and the shippers had neither agreed nor intended that any rebate should be made.

Affirming the decision of the Supreme Court of New Hampshire, the court, in the case of H. P. Welch Company v. State of New Hampshire, held that the New Hampshire statute regulating hours of service for motor carrier employees within that State, as applied to common and contract carriers in interstate commerce, does not violate the Fourteenth Amendment, and that the hours of service provisions of the statute were not superseded by the Motor Carrier Act of 1935. In its decision, the court said that "Congress by mere grant of power to the Interstate Commerce Commission did not intend to supersede state police regulations for the protection of the public using state highways."

In another case affecting motor carriers, the court held that the Georgia highway maintenance tax, as applied to a common carrier operating exclusively in interstate commerce, is not repugnant to the commerce clause of the Constitution, although no part of the tax paid is allocated to highways over which the carrier operates, where the amount of the tax is not shown to exceed the worth of the granted use of the roads so as to amount to a tax on the privilege of carrying on the business of interstate commerce. Also, the court said that the tax does not violate the equal protection clause of the Fourteenth Amendment because it imposes a higher tax rate

on carriers for hire, since the classification for road taxation purposes of carriers for hire and carriers not for hire has a reasonable foundation.

N. R. A. A. March Exhibit

Sixty member companies have already arranged for space at the twenty-eighth annual exhibit of the National Railway Appliances Association to be held at Chicago, on March 13-16, coincident with the conventions of the American Railway Engineering Association and the Signal Section, A. A. R. Based on past experience, this indicates that the exhibit this year will be as large or larger than in recent years.

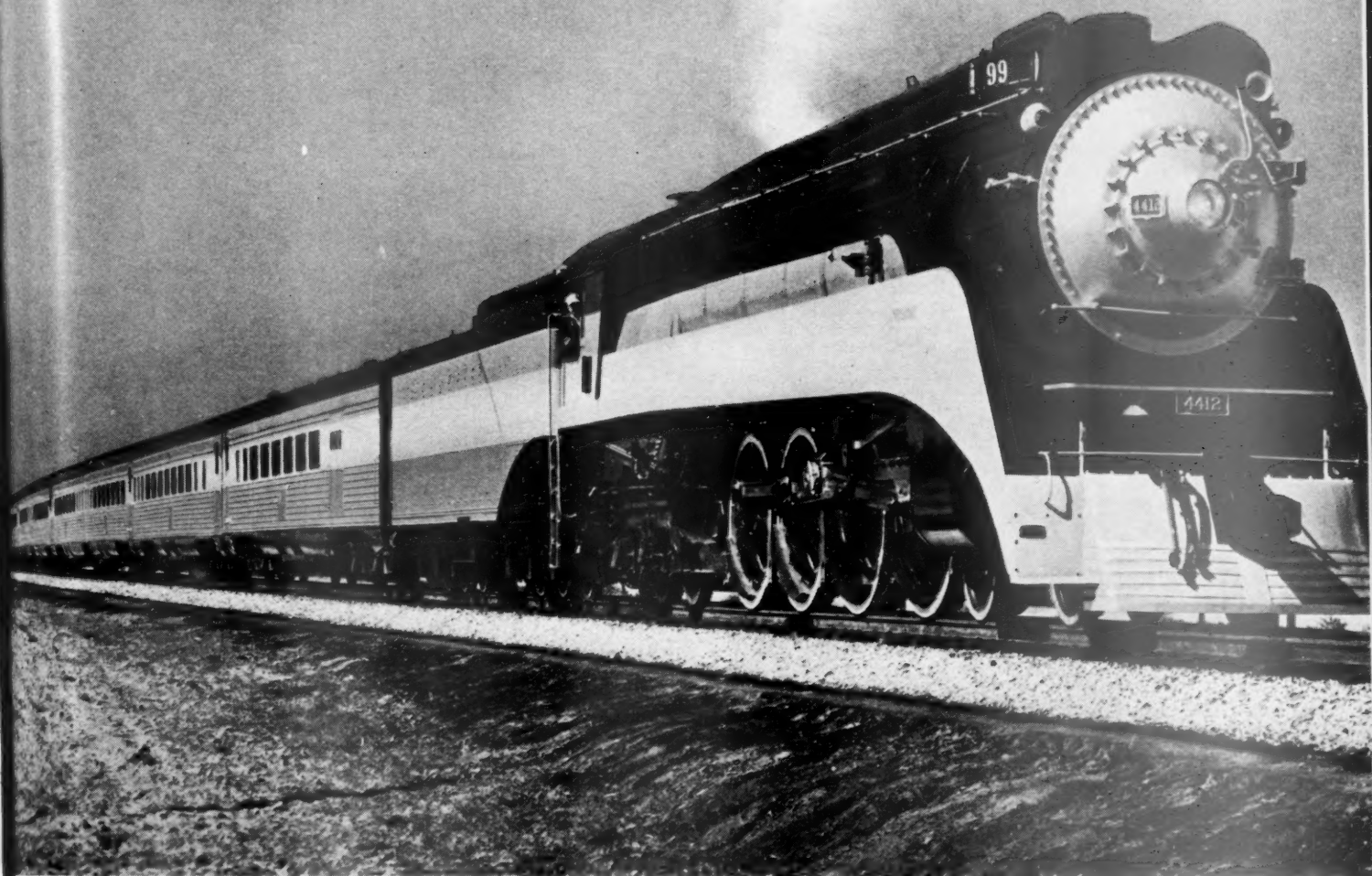
In view of the large exhibit planned, which will be held in the spacious and attractive International Amphitheatre, it is expected that it will be largely attended, not alone by those engineering, maintenance of way and signal officers who will participate in the two conventions, but also by many other railway men located in and about Chicago. In addition, a large number of purchasing and stores department officers will see the exhibit, the Purchases and Stores division, A. A. R., having arranged a number of committee meetings in Chicago during the convention week to make this possible.

For the convenience of those attending the two conventions and the meetings of the Purchases and Stores division, frequent complimentary bus service will be operated between the Amphitheatre and the Palmer House and Stevens Hotel. Co-operating with the railway associations, the N. R. A. A. is making a special effort to confine all manufacturers' exhibits to the Amphitheatre, to the exclusion of exhibits and entertainment at the convention hotels.

The companies which have arranged to present exhibits to date are as follows:

Air Reduction Sales Co., New York
American Car & Foundry Co., New York
American Fork & Hoe Co., Cleveland, Ohio
Armo Culvert Manufacturers Ass'n., Middletown, Ohio
Barco Manufacturing Co., Chicago
Buda Company, Harvey, Ill.
Cleveland Frog & Crossing Co., Cleveland, Ohio
Cleveland Tractor Co., Cleveland, Ohio
Cullen-Friedstedt Co., Chicago
Dearborn Chemical Co., Chicago
Dickinson, Inc., Paul, Chicago
Duff-Norton Manufacturing Co., Pittsburgh, Pa.
Eaton Manufacturing Co. (Spring Washer Div.), Massillon, Ohio
Elastic Rail Spike Corp., New York
Electric Tamper & Equipment Co., Ludington, Mich.
Fairbanks, Morse & Co., Chicago
Fairmont Railway Motors, Inc., Fairmont, Minn.
Hogan, George M., Chicago
Homelite Corporation, Port Chester, N. Y.
Hubbard & Co., Pittsburgh, Pa.
Industrial Brownhoist Corporation, Bay City, Mich.
International Harvester Co., Chicago
Johns-Manville, New York
Jordan Co., O. F., East Chicago, Ind.
Kalamazoo Railway Supply Co., Kalamazoo, Mich.
Lehon Co., Chicago
Lewis Bolt & Nut Co., Minneapolis, Minn.
Maintenance Equipment Co., Chicago
Mall Tool Co., Chicago
Master Builders Co., Cleveland, Ohio
Metal & Thermit Corp., New York
Morden Frog & Crossing Works, Chicago
Morrison Railway Supply Corp., Buffalo, N. Y.
National Aluminate Co., Chicago
National Lead Co., New York
National Lock Washer Co., Newark, N. J.
Nordberg Manufacturing Co., Milwaukee, Wis.
Oxweld Railroad Service Co., Chicago.
P. & M. Co., Chicago
Pettibone Mulliken Co., Chicago
Philadelphia Steel & Wire Corp., Philadelphia, Pa.
Pocket List of Railroad Officials, New York
Rail Joint Co., New York
Railroad Accessories Corp., New York
Rails Co., New Haven, Conn.

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Railway Age, New York
 Railway Purchases and Stores, Chicago
 Railway Track-Work Co., Philadelphia, Pa.
 Ramapo Ajax Div., American Brake Shoe & Foundry Co., New York
 Republic Steel Corp., Cleveland, Ohio
 Sika, Inc., New York
 Sperry Products, Inc., Hoboken, N. J.
 Teleweld, Inc., Chicago
 Templeton, Kenly & Co., Chicago
 Timber Engineering Co., Washington, D. C.
 United States Steel Corp., Pittsburgh, Pa.
 U. S. Wind Engine & Pump Co., Batavia, Ill.
 Western Railroad Supply Co., Chicago
 Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa.
 Woolery Machine Co., Minneapolis, Minn.

N. O. I. for 1938 Was \$372,846,314

(Continued from page 237)

district net for December was \$26,276,164 compared with \$13,894,041 in December, 1937, and \$21,936,644 in December, 1930.

In the Southern district, the 1938 net was \$60,205,687, or a return of 1.91 per cent; in 1937, it amounted to \$74,160,008, or 2.34 per cent, and in 1930 it was \$88,405,629, or 2.68 per cent. Gross in the Southern district in 1938 amounted to \$471,305,776 a decrease of 8.8 per cent compared with 1937, and a decrease of 26.5 per cent under 1930. Operating expenses totaled \$357,484,253, a decrease of 8.5 per cent below 1937, and a decrease of 28.9 per cent under 1930. Class I roads in the Southern district for December had a net of \$7,915,176 compared with \$5,656,267 in December, 1937, and \$8,768,588 in December 1930.

Class I railroads in the Western district in 1938 had a net of \$117,514,428, or a return of 1.10 per cent on their property investment. In 1937, the railroads in that district had a net of \$182,981,224, or a return of 1.71 per cent; in 1930 it was \$341,821,231 or 3.14 per cent. Gross in the Western district in 1938 amounted to \$1,408,784,580, a decrease of 11.2 per cent below 1937, and a decrease of 30.2 per cent under 1930; operating expenses totaled \$1,102,257,460, a decrease of 10 per cent compared with 1937, and a decrease of 25.3 per cent under 1930. Class I roads in the Western district for December had a net railway income of \$15,181,837 compared with \$6,444,549 in December, 1937, and \$17,800,199 in December, 1930.

Hearing on Amlie Set for February 6

(Continued from page 236)

in privately owned lines. . . . This is not a question of personal integrity. It is a question of placing a man in one of the great independent agencies of the government to administer its affairs and sit in judgment on technical questions of transportation, with opinions, expressed in advance, hostile to the established order of our government. It is a paradoxical situation which we seldom meet—that a man so mentally out of harmony with a job could be given cheering assistance from the appointing power."

Mr. Bolles next asked if there were "no Republican like Balthasar Meyer in the State or Nation, or no Progressive?" He wound up with references to various of Mr. Amlie's past utterances, and read the

proposed "human rights" amendment to the Constitution which Mr. Amlie sponsored, as noted in last week's issue.

Later the same day Representative Voorhis, Democrat of California, arose to ask that "fair play be used," and that "the real facts be given and not that irresponsible charges be allowed to take their place." Noting that Mr. Amlie had been called "a small-town, country lawyer," Mr. Voorhis recalled that the same was true of Abraham Lincoln, Henry Clay and Andrew Jackson. Previously he had said that the appointee "is as fundamentally devoted to constitutional democracy in this country as any man in this House." Representative Martin, Democrat of Colorado, reminded his colleagues that when President Wilson appointed Justice Brandeis to the Supreme Court, Mr. Brandeis was "denounced as an anarchist by the very same reactionary groups and interests that are denouncing Mr. Amlie as a Communist, but long since, whenever these groups and interests want to show to the country that the Supreme Court is still worthy of their confidence and respect, they always put Mr. Justice Brandeis in as exhibit A." Mr. Martin added that inasmuch as Mr. Amlie is young, "there is still hope for him; he, too, may be respectable 20 years from now."

After further brief comments from various other members, Representative Shafer, Republican of Wisconsin, made an address on the effect of the appointment on the political complexion of the I. C. C. Mr. Shafer finds seven Democrats among present commissioners, listing Commissioner Eastman as a Democrat in view of his appointment as such by President Hoover. (Mr. Eastman calls himself an independent in politics.) According to Mr. Shafer's calculations, the confirmation of Mr. Amlie would give the "New Deal forces" eight members of the commission. In this connection he had previously told his colleagues not to forget that "the Democratic forces have united with the progressive, Communist and Socialist forces, and are in the New Deal army with them now."

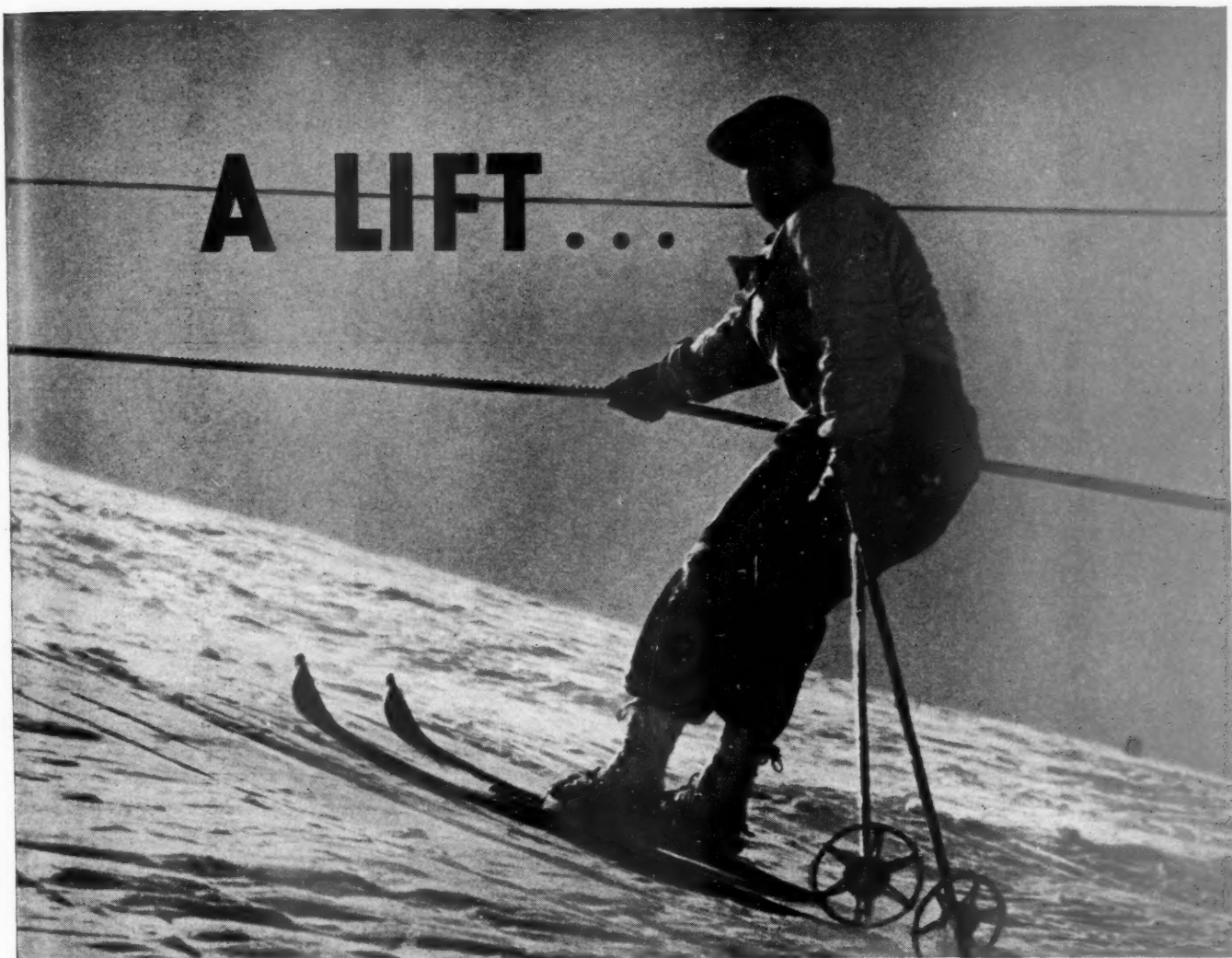
Meetings and Conventions

The following list gives names of secretaries, dates of next or regular meetings and places of meetings:

AIR BRAKE ASSOCIATION.—R. P. Ives, Westinghouse Air Brake Co., 350 Fifth Ave., New York, N. Y.
 ALLIED RAILWAY SUPPLY ASSOCIATION.—J. F. Gettrust, P. O. Box 5522, Chicago, Ill.
 AMERICAN ASSOCIATION OF FREIGHT TRAFFIC OFFICERS.—W. R. Curtis, F. T. R., M. & O. R. R., 327 S. La Salle St., Chicago, Ill.
 AMERICAN ASSOCIATION OF GENERAL BAGGAGE AGENTS.—E. P. Soebbing, 1431-B Railway Exchange Bldg., St. Louis, Mo.
 AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—B. D. Branch, C. R. R. of N. J., 143 Liberty St., New York, N. Y.
 AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—F. O. Whiteman, Union Station, St. Louis, Mo., Annual meeting, June 6-8, 1939, Hotel Stevens, Chicago, Ill.
 AMERICAN ASSOCIATION OF RAILWAY ADVERTISING AGENTS.—E. A. Abbott, Poole Bros., Inc., 85 W. Harrison St., Chicago, Ill.
 AMERICAN ASSOCIATION OF SUPERINTENDENTS OF DINING CARS.—F. R. Borger, C. I. & L. Ry., 836 S. Federal St., Chicago, Ill.
 AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—C. A. Lichty, 319 N. Waller Ave., Chicago, Ill., Annual meeting, October 17-19, 1939, Hotel Stevens, Chicago, Ill.
 AMERICAN RAILWAY CAR INSTITUTE.—W. C. Tabbert, 19 Rector St., New York, N. Y.
 AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—J. M. Hurley, N. Y. O. & W. Ry., Middletown, N. Y.
 AMERICAN RAILWAY ENGINEERING ASSOCIATION.—

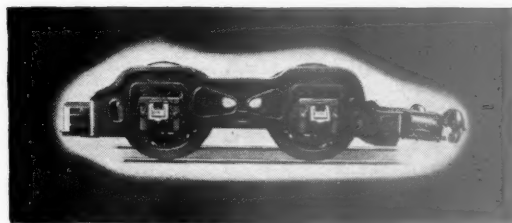
Works in co-operation with the Association of American Railroads, Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago, Ill., Annual meeting, March 14-16, 1939, Palmer House, Chicago, Ill.
 AMERICAN RAILWAY MAGAZINE EDITORS' ASSOCIATION.—M. W. Jones, Baltimore & Ohio R. R., 1105 B. & O. R. R. Bldg., Baltimore, Md.
 AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.—G. G. Macina, C. M., St. P. & P. R. R., 11402 Calumet Ave., Chicago, Ill.
 AMERICAN SHORT LINE RAILROAD ASSOCIATION.—R. E. Schindler, Tower Bldg., Washington, D. C.
 AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—C. E. Davies, 29 W. 39th St., New York, N. Y.
 Railroad Division.—Marion B. Richardson, 21 Hazel Ave., Livingston, N. J.
 AMERICAN TRANSIT ASSOCIATION.—Guy C. Hecker, 292 Madison Ave., New York, N. Y.
 AMERICAN WOOD PRESERVERS' ASSOCIATION.—H. L. Dawson, 1427 Eye St., N. W., Washington, D. C.
 ASSOCIATION OF AMERICAN RAILROADS.—H. J. Forster, Transportation Bldg., Washington, D. C.
 Operations and Maintenance Department.—J. M. Symes, Vice-President, Transportation Bldg., Washington, D. C.
 Operating-Transportation Division.—L. R. Knott, 59 E. Van Buren St., Chicago, Ill.
 Transportation Section.—L. R. Knott, 59 E. Van Buren St., Chicago, Ill.
 Freight Station Section.—L. R. Knott, 59 E. Van Buren St., Chicago, Ill.
 Operating Section.—J. C. Caviston, 30 Vesey St., New York, N. Y.
 Medical and Surgical Section.—J. C. Caviston, 30 Vesey St., New York, N. Y.
 Protective Section.—J. C. Caviston, 30 Vesey St., New York, N. Y.
 Safety Section.—J. C. Caviston, 30 Vesey St., New York, N. Y.
 Telegraph and Telephone Section.—W. A. Fairbanks, 30 Vesey St., New York, N. Y., Annual meeting, April 18-20, 1939, Hotel Jefferson, St. Louis, Mo.
 Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago, Ill., Annual meeting, March 14-16, 1939, Palmer House, Chicago, Ill.
 Construction and Maintenance Section.—W. S. Lacher, 59 E. Van Buren St., Chicago, Ill., Annual meeting, March 14-16, 1939, Palmer House, Chicago, Ill.
 Electrical Section.—W. S. Lacher, 59 E. Van Buren St., Chicago, Ill.
 Signal Section.—R. H. C. Balliet, 30 Vesey St., New York, N. Y., Annual meeting, March 13-14, 1939, Hotel Stevens, Chicago, Ill.
 Mechanical Division.—V. R. Hawthorne, 59 E. Van Buren St., Chicago, Ill., Next meeting, June, 1939 (tentative), New York, N. Y.
 Electrical Section.—J. A. Andreucetti, 59 E. Van Buren St., Chicago, Ill.
 Purchases and Stores Division.—W. J. Farrell, 30 Vesey St., New York, N. Y.
 Freight Claims Division.—Lewis Pilcher, 59 E. Van Buren St., Chicago, Ill.
 Motor Transport Division.—George M. Campbell, Transportation Bldg., Washington, D. C.
 Car-Service Division.—E. W. Coughlin, Transportation Bldg., Washington, D. C.
 Finance, Accounting, Taxation and Valuation Department.—E. H. Bunnell, Vice-President, Transportation Bldg., Washington, D. C.
 Accounting Division.—E. R. Ford, Transportation Bldg., Washington, D. C.
 Treasury Division.—E. R. Ford, Transportation Bldg., Washington, D. C.
 Traffic Department.—A. F. Cleveland, Vice-President, Transportation Bldg., Washington, D. C.
 ASSOCIATION OF RAILWAY CLAIM AGENTS.—F. L. Johnson, Claim Agent, Alton R. R., 340 W. Harrison St., Chicago, Ill., Annual meeting, May 17-19, 1939, Memphis, Tenn.
 BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—W. S. Carlisle, National Lead Company, 900 W. 18th St., Chicago, Ill., Meets with American Railway Bridge and Building Association.
 CANADIAN RAILWAY CLUB.—C. R. Crook, 4468 Oxford Ave., N. D. G., Montreal, Que., Regular meetings, second Monday of each month, except June, July and August, Windsor Hotel, Montreal, Que.
 CAR DEPARTMENT ASSOCIATION OF ST. LOUIS, Mo.—J. J. Sheehan, 1101 Missouri Pacific Bldg., St. Louis, Mo., Regular meetings, third Tuesday of each month, except June, July and August, Hotel Mayfair, St. Louis, Mo.
 CAR DEPARTMENT OFFICERS' ASSOCIATION.—Frank

Continued on next left-hand page



...to speed up hill climbing

Locomotives, too, need a boost to take the hills without loss of valuable time. The Locomotive Booster gives this extra lift by supplying added power to what would otherwise be an idle trailer axle . . . enabling the locomotive to make smooth, quick starts and to reach road-speed without unnecessary delay or discomfort to passengers. » » » Give your locomotives this added lift which enables you to reduce the top-speed of your run, yet maintain your schedules...Incorporate the Locomotive Booster in your design.



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CAR FOREMEN'S ASSOCIATION OF CHICAGO.—G. K. Oliver, 2514 W. 55th St., Chicago, Ill. Regular meetings, second Monday of each month, except June, July and August, La Salle Hotel, Chicago, Ill.

CENTRAL RAILWAY CLUB OF BUFFALO.—Mts. M. D. Reed, 1817 Hotel Statler, McKinley Square, Buffalo, N. Y. Regular meetings, second Thursday of each month, except June, July and August, Hotel Statler, Buffalo, N. Y.

EASTERN ASSOCIATION OF CAR SERVICE OFFICERS.—J. T. Bougher, 424 W. 33rd St. (11th floor), New York, N. Y. Next meeting, March 30, 1939, Washington, D. C.

INTERNATIONAL RAILWAY GENERAL FOREMEN'S ASSOCIATION.—F. T. James, General Foreman, Delaware, Lackawanna & Western, Kingsland, N. J.

INTERNATIONAL RAILWAY MASTER BLACKSMITHS' ASSOCIATION.—W. J. Mayer, Michigan Central R. R., Detroit, Mich.

MASTER BOILER MAKERS' ASSOCIATION.—A. F. Stiglmeier, 29 Parkwood St., Albany, N. Y.

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—Clyde S. Bailey, New Post Office Bldg., Washington, D. C. Annual meeting, August 22-25, 1939, Seattle, Wash.

NATIONAL RAILWAY APPLIANCES ASSOCIATION.—C. H. White, Room 1826, 208 S. La Salle St., Chicago, Ill. Exhibit in connection with A. R. E. A. Convention, March 13-16, 1939, International Amphitheatre, Chicago, Ill.

NEW ENGLAND RAILROAD CLUB.—W. E. Cade, Jr., 683 Atlantic Ave., Boston, Mass. Regular meetings, second Tuesday of each month, except June, July, August and September, Hotel Touraine, Boston, Mass.

NEW YORK RAILROAD CLUB.—D. W. Pye, 30 Church St., New York, N. Y. Regular meetings, third Friday of each month, except June, July, August, September and December, 29 W. 39th St., New York, N. Y.

PACIFIC RAILWAY CLUB.—William S. Wollner, P. O. Box 3275, San Francisco, Cal. Regular meetings, second Thursday of each month, alternately at San Francisco and Oakland, except June at Los Angeles and October at Sacramento.

RAILWAY BUSINESS ASSOCIATION.—P. H. Middleton, First National Bank Bldg., Chicago, Ill.

RAILWAY CLUB OF PITTSBURGH.—J. D. Conway, 1941 Oliver Bldg., Pittsburgh, Pa. Regular meetings, fourth Thursday of each month, except June, July and August, Fort Pitt Hotel, Pittsburgh, Pa.

RAILWAY ELECTRICAL SUPPLY MANUFACTURERS' ASSOCIATION.—J. Mc C. Price, Allen-Bradley Company, 600 W. Jackson Blvd., Chicago, Ill.

RAILWAY FIRE PROTECTION ASSOCIATION.—P. A. Bissell, 40 Broad St., Boston, Mass.

RAILWAY FUEL AND TRAVELING ENGINEERS' ASSOCIATION.—T. Duff Smith, 1255 Old Colony Bldg., Chicago, Ill.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—J. D. Conway, 1941 Oliver Bldg., Pittsburgh, Pa. Meets with Mechanical Division and Purchases and Stores Division, Association of American Railroads.

RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York, N. Y. Meets with Telegraph and Telephone Section of A. A. R.

RAILWAY TIE ASSOCIATION.—Roy M. Edmonds, 903 Syndicate Trust Bldg., St. Louis, Mo.

ROADMASTERS' AND MAINTENANCE OF WAY ASSOCIATION.—C. A. Lichty, 319 N. Waller Ave., Chicago, Ill. Annual meeting September 19-21, 1939, Hotel Stevens, Chicago, Ill.

SIGNAL APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York, N. Y. Meets with A. A. R., Signal Section.

SOCIETY OF OFFICERS, UNITED ASSOCIATIONS OF RAILROAD VETERANS.—Roy E. Collins, 112 Hatfield Place, Port Richmond, Staten Island, N. Y. Annual meeting, October 14-15, 1939, Hotel Roanoke, Roanoke, Va.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.—A. T. Miller, 4 Hunter St., S. E., Atlanta, Ga. Regular meetings, third Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta, Ga.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.—D. W. Brantley, C. of Ga. Ry., Savannah, Ga.

TORONTO RAILWAY CLUB.—D. M. George, P. O. Box 8, Terminal "A," Toronto, Ont. Regular meetings, fourth Monday of each month, except June, July and August, Royal York Hotel, Toronto, Ont.

TRACK SUPPLY ASSOCIATION.—Lewis Thomas, O. & C. Company, 59 E. Van Buren St., Chicago, Ill. Meets with Roadmasters' and Maintenance of Way Association.

WESTERN RAILWAY CLUB.—W. L. Fox, (Executive Secretary), Room 822, 310 South Michigan Ave., Chicago, Ill. Regular meetings, third Monday of each month, except June, July, August and September, Hotel Sherman, Chicago, Ill.

Equipment and Supplies

Equipment Orders for January

Equipment manufacturers received domestic orders during January for a total of 8 locomotives (all Diesel-electric), 3 freight cars, and 47 passenger-train cars. These totals compare with 9 locomotives and 25 freight cars ordered during January,

Total roadway expenses for the year will be \$998,103, and total mechanical expenses, \$313,617. Automatic signals and interlockers are to be installed at various points between Sapulpa, Okla., and Henrietta. Five locomotives will be rebuilt in the company's shops at Springfield, Mo.

IRON AND STEEL

THE CHICAGO, BURLINGTON & QUINCY'S rail requirements for 1939 are 10,000 tons of rails and 2,500 tons of fittings. Because of the carry over of the tonnage

Domestic Equipment Orders Reported in Issues of The Railway Age in January, 1939

		LOCOMOTIVES		Builder
Date	Name of Company	No.	Type	
Jan. 7	Minnesota Transfer	3	Diesel-electric Sw.	American Locomotive Co.
Jan. 14	Ft. Worth Belt	1	Diesel-electric Sw.	Electro-Motive Corp.
Jan. 14	Erie (Buffalo Creek)	2	Diesel-electric Sw.	Electro-Motive Corp.
Jan. 28	Chicago & North Western	2	Diesel-electric	Electro-Motive Corp.
		FREIGHT CARS		Builder
Jan. 21	U. S. Navy Dept.	3	Flat	Haffner-Thrall Car Co.
		PASSENGER-TRAIN CARS		Builder
Jan. 14	Pennsylvania	5	Dining	Edward G. Budd Mfg. Co.
		12	Coach	Edward G. Budd Mfg. Co.
		5	Dining	Pullman-Standard
		5	Dining	American Car & Foundry
Jan. 28	Chicago & North Western	2	Taproom-lounge	Pullman-Standard
		8	Coach	Pullman-Standard
		2	Dining	Pullman-Standard
		6	Parlor	Pullman-Standard
		2	Observation-club	Pullman-Standard

1938. The carriers ordered a total of 208,520 tons of rail during the month.

North Western Budget

The Chicago & North Western is preparing a budget for expenditures for roadway and equipment which will be submitted to directors and the court for approval in the near future. The purchase of approximately 1,000 freight cars and a sizeable tonnage of rails is contemplated.

Wabash Expenditures

The Wabash has been authorized by the federal district court at St. Louis, Mo., to spend \$2,128,670 for maintenance, betterments and improvements. In seeking authority for this expenditure the trustees stated that in the event the funds at hand do not reasonably justify carrying out the full program, the money would be spent on items most needed. Of the total, \$1,268,000 will be spent for the purchase and laying of 10,000 tons of new rails and relaying of old rails, \$944,825 is to be charged to the road and equipment fund, \$788,555 against operating expenses and \$395,290 against miscellaneous expenses.

Frisco Budget

The \$1,311,700 budget of the St. Louis-San Francisco, approved by the district court, announced in the *Railway Age* of January 21, includes: 12,500 tons of 112-lb. rails, the order for which was reported in the *Railway Age* of January 21, \$512,587; bridges, trestles and culverts \$262,348; widening cuts and fills and bank protection, \$66,532; signals and interlockers, \$76,447; shop buildings, engine houses and appurtenances, \$11,603; freight and passenger stations, office buildings and other station facilities, \$13,626; and ballasting, \$19,350.

ordered in 1938, the new rails will not be purchased until the carry over has been delivered and laid.

THE MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE has ordered approximately 6,000 tons of rails.

THE DELAWARE, LACKAWANNA & WESTERN is inquiring for 6,000 tons of 131-lb. rail and will purchase the necessary track accessories.

THE CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC has ordered 30,000 tons of rails, placing 22,000 tons with the Carnegie-Illinois Steel Corporation and 8,000 tons with the Inland Steel Company.

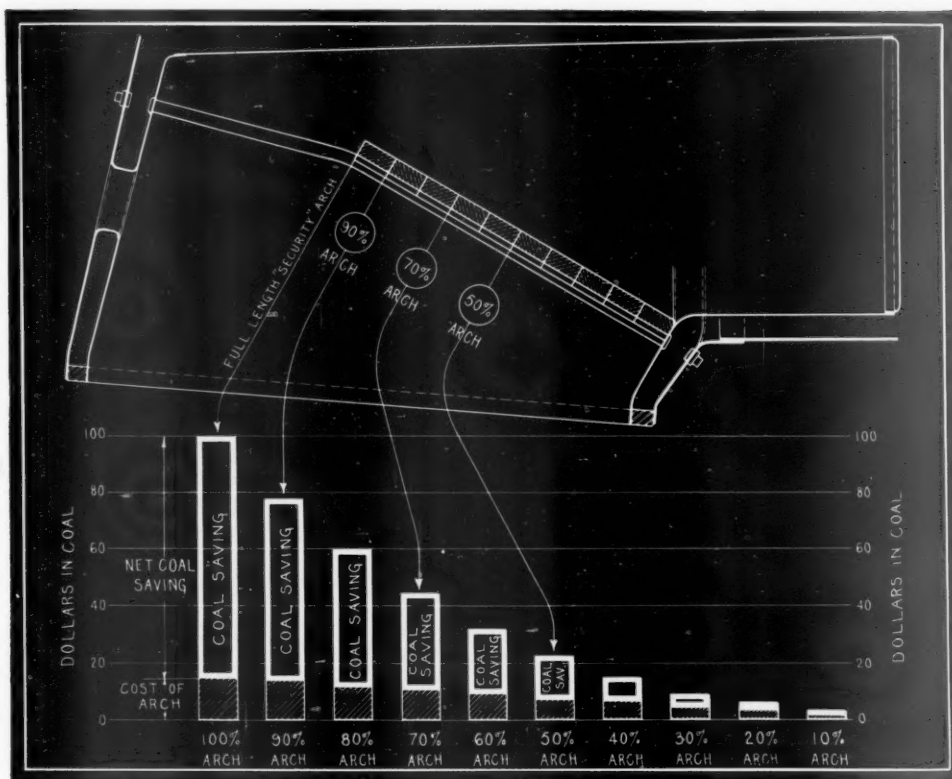
LOCOMOTIVES

THE MEXICAN GOVERNMENT RAILWAYS have ordered two oil-electric locomotives of 65 tons and 500 hp., from the General Electric Company.

SIGNALING

THE DELAWARE & HUDSON has been ordered by the New York Public Service Commission to install automatic flashing light signals at Guilford road or Beatty crossing of the railroad in the town of Bainbridge, N. Y.

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—Sealed bids will be received by the trustees of the property of this road until 10:00 a. m., February 13, for miscellaneous signal material to be used in connection with federal grade crossing protection project at 72nd street, Tacoma and Algona, in the State of Washington. Plans and specifications may be obtained from G. H. Walder, purchasing agent, 718 Union Station building, Chicago.



THE EFFECT OF ABBREVIATED ARCHES ON FUEL SAVING

LET THE ARCH HELP YOU SAVE

With the emphasis being placed on saving every railroad dollar, the locomotive Arch becomes increasingly important.

Regardless of the amount of traffic handled, the locomotive Arch saves enough fuel to pay for itself ten times over.

Be sure that every locomotive leaving the roundhouse has its Arch complete with not a single brick nor a single course missing.

In this way, you will get more work for each dollar of fuel expense. Skimping on Arch Brick results in a net loss to the railroad.

THERE'S MORE TO SECURITY ARCHES THAN JUST BRICK

**HARBISON-WALKER
REFRACTORIES CO.**

Refractory Specialists



**AMERICAN ARCH CO.
INCORPORATED**

60 EAST 42nd STREET, NEW YORK, N. Y.

*Locomotive Combustion
Specialists*

Supply Trade

C. D. Hicks and Company, St. Louis, Mo., have been appointed manufacturers agent for the **Bridgeport Safety Emery Wheel Company**.

The **Inland Steel Company**, Chicago, has acquired the **Wilson & Bennett Manufacturing Company**, Chicago, subject to approval by the stockholders.

G. J. Weber, secretary of the **Association of Manufacturers of Chilled Car Wheels**, Chicago, has also been appointed executive assistant to the president.

W. A. Huber has been appointed manager of sales of the **Gilmore Wire Rope** division of the **Jones & Laughlin Steel Corporation**, Pittsburgh, Pa.

The general sales department of the **Standard Steel Works Company**, on January 28, was transferred from Burnham, Pa., to The **Baldwin Locomotive Works** office building at Eddystone, Pa.

Roscoe Seybold, vice-president and comptroller of the **Westinghouse Electric & Manufacturing Company**, has been elected a member of the board of directors of the company.

W. R. Swoish, switchgear supervisor for the northwestern district of the **Westinghouse Electric & Manufacturing Co.**, with headquarters in Chicago, has resigned to become sales manager of the **Roller-Smith Company**, with headquarters at Bethlehem, Pa.

Walter F. Jerome, previously manager of the coach division covering the New England territory for the **White Motor Company**, has joined the sales organization of **Luminator, Inc.**, Chicago, in charge of sales in the eastern zone. Mr. Jerome's headquarters will be in New York City. For the past three years he has been traveling out of Boston for the **White Motor Company**.

Robert W. Lea, on January 18, resigned as president of the **West Virginia Coal & Coke Co.**, and has been elected a vice-president of **Johns-Manville Corporation**, New York, in charge of finance. He will take over the position formerly held by **Enders M. Voorhees** who left **Johns-Manville** to become chairman of the Finance committee of the **United States Steel Corporation**. Mr. Lea will assume his new duties with **Johns-Manville Corporation** about the end of March. He will remain on the board of directors of the **West Virginia Coal & Coke Co.**

James P. Raugh, assistant general sales manager of the **General Refractories Company**, Philadelphia, Pa., has been appointed general sales manager. Mr. Raugh joined the sales personnel of the Pittsburgh office of this company in 1929, following graduation from the **United States Naval Academy** and several years in the naval service. Later he became district sales manager of the **Detroit, Mich.**, and **Cleveland, Ohio** offices, and during the past three

years has been assistant general sales manager. **Fred M. Miller**, who joined the company in 1924 as chief engineer, has been appointed general works manager and **A. C. Shape** has been appointed acting chief engineer to succeed Mr. Miller.

John E. Long has been appointed Western sales manager of the **Franklin Railway Supply Company, Inc.**, with headquarters in the **McCormick** building, Chicago. Mr. Long was graduated from **Purdue University** in 1923 with the degree of B. S. in mechanical engineering. Prior to his graduation he was employed in various capacities by the **Pennsylvania, Baltimore & Ohio**, and the **Atchison, Topeka & Santa Fe**. In 1923 he entered the service of the **Lima Locomotive Works, Incorporated**, where he remained eleven years, during which time he was in the calculating, service, engineering and sales departments and had extensive experience in special design work and in locomotive testing. He also engaged in the study of operating conditions on various roads. In 1934, Mr. Long joined the **Franklin Railway Supply Company, Inc.**, with headquarters at Chicago, where he has since been employed.

William H. Winterrowd, vice-president of the **Franklin Railway Supply Company, Inc.**, has been elected vice-president



William H. Winterrowd

in charge of operations of the **Baldwin Locomotive Works**, with headquarters at Eddystone, Pa. He will assume the duties of his new office about February 15.

Mr. Winterrowd was born April 2, 1884, in the town of Hope, Ind. After attending the grade and high school in Shelbyville, Ind., he studied at **Purdue University**, graduating in 1907 with the B. S. degree in mechanical engineering. He has been a railroad man and a locomotive builder all his business life. During his summer college vacations he worked as a locomotive wiper on the **Missouri Pacific**, a blacksmith's helper on the **Lake Erie & Western** (now the **New York, Chicago & St. Louis**) at Lima, Ohio, and as a car and air brake repairman on the **Pennsylvania Lines** West of Pittsburgh, at Dennison, Ohio. After graduation he became a special apprentice on the **Lake Shore & Michigan Southern** (now **New York Central**), following which he was enginehouse foreman on the **Lake Erie, Alliance & Wheel-**

ing (now the **New York Central**); night enginehouse foreman on the **Lake Shore & Michigan Southern**, at Youngstown, Ohio, and roundhouse foreman at Cleveland. In 1910 he became assistant to the mechanical engineer of the road.

In 1912 Mr. Winterrowd went to the **Canadian Pacific** as mechanical engineer and in 1915 became assistant chief mechanical engineer. In 1917, after converting part of the railroad's largest shop into a munitions plant, he went with **Sir George Bury**, vice-president of the **Canadian Pacific**, to Russia, as a member of **Lord Milner's** mission, where he traversed every mile of railway in European Russia, studying motive power, cars, shops, enginehouses and machine tool equipment. During this period he had some exciting experiences in the **Kerensky Revolution**. After report of the commission was made to **David Lloyd George**, prime minister of England, Mr. Winterrowd returned to Montreal in 1918, and was made chief mechanical engineer of the **Canadian Pacific Railway**.

In 1923 he joined the **Lima Locomotive Works, Inc.**, as assistant to the president and, in 1927, he became vice-president of that company. Since 1934 he has been vice-president of the **Franklin Railway Supply Company, Inc.**

In 1936 Mr. Winterrowd received the degree of doctor of engineering from **Purdue University**, the citation for the degree reading: "Engineer of high repute, executive of recognized achievements, humanist of inspiring example." He was president of the **Canadian Railway Club** in 1920-21. He is a director of the **Purdue Research Foundation**; and a member of the **Mechanical Division, Association of American Railroads**. Dr. Winterrowd has been active in the work of the **American Society of Mechanical Engineers** for many years, serving at different times as chairman of both the **Committee on Publications** and the **Railroad Division**. Recently he was elected a manager of that society. He is also a member of a number of engineering societies.

OBITUARY

James F. Cosgrove, for many years manager of service in the railroad division of the **Worthington Pump & Machinery Corporation**, died on January 21, at his home in East Orange, N. J., after a brief illness. A native of Madison, Wisc., Mr. Cosgrove was graduated from the **University of Wisconsin** with an engineering degree. He afterward joined the faculty of the **National School of Electricity** in Chicago, and later, for 23 years, was on the faculty of the **International Correspondence School** at Scranton, Pa., being the author of several textbooks on combustion of coal and the firing of locomotives. He had been with **Worthington Pump & Machinery Corporation** since 1923.

William P. Bradbury, vice-president and general sales manager of the **Consolidated Ashcroft Hancock Division of Manning, Maxwell & Moore, Inc.**, Bridgeport, Conn., died of pneumonia after a six-day illness, on January 14, at the age of 53 years. Mr. Bradbury joined **Manning,**

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of superheated steam
that is recommended

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Superheaters provide for
higher superheat with more
evaporating and
superheating surfaces
... resulting in
Higher Boiler Efficiencies



A-1297

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Superheaters • Exhaust Steam Injectors • Feed Water Heaters • American Throttles • Pyrometers • Steam Dryers

Maxwell & Moore in 1902 as an office boy. He advanced through various positions in the sales department and his assignments took Mr. Bradbury to many parts of the



William P. Bradbury

United States and some foreign countries. In 1923 he was appointed general sales manager and in 1930, vice-president in charge of sales.

Construction

APALACHICOLA NORTHERN.—The Interstate Commerce Commission, Division 4, has authorized this company to construct an extension of its line of railroad from a point at or near the intersection of First Street and Peid Avenue, westerly to the property of the Dock & Terminal Company, 6,200 ft., all within the corporate limits of Port St. Joe, Fla.

ATCHISON, TOPEKA & SANTA FE.—A contract has been awarded by the Division of Highways of the State of California, Department of Public Works, to the United Concrete Pipe Corporation, Los Angeles, Cal., amounting to \$178,461 for the construction of the Oak Street bridge, a grade separation project over the tracks of this road at Bakersfield, Cal. The bridge will consist of 20 steel I-beam spans varying in length from 45 ft. to 80 ft., supported on reinforced concrete bents on timber piles. The deck of the bridge will provide a roadway 26 ft. wide plus two 3 ft. 6 in. sidewalks and reinforced concrete handrails. The structure will span five existing tracks of the Santa Fe and will provide for seven additional tracks.

CHESAPEAKE & OHIO.—A contract has been awarded A. W. Walker & Son, Danville, Ky., by the Commonwealth of Kentucky Department of Highways, for the construction of a railroad bridge for the two main line tracks of this road over Euclid avenue in Paintsville, Ky. The structure will consist of two I-beam spans, one 50 ft. long and one 30 ft. long, with a reinforced concrete deck supported on two reinforced concrete abutments and one steel bent. The bridge structure proper will cost about \$35,000.

Financial

CENTRAL OF NEW JERSEY.—*New Director Elected.*—W. V. Griffin, president of the Brady Securities & Realty Corporation, has been elected a director of the Central of New Jersey.

CENTRAL TERMINAL.—*Bonds.*—This company has been authorized by Division 4 of the Interstate Commerce Commission, to extend from November 1, 1941, to November 1, 1953, the date of maturity of \$1,231,000 of first mortgage Chicago terminal four per cent 30-year sinking fund gold bonds.

CENTRAL VERMONT.—*New Director Elected.*—N. B. Walton, vice-president in charge of operations, maintenance and construction, Canadian National, has been elected a director of this road.

CHICAGO & EASTERN ILLINOIS.—*Reorganization Plan Approved.*—Division 4 of the Interstate Commerce Commission has changed its plan of reorganization for this company to conform with changes desired by the debtor company. The company asked that the plan be changed so as to recognize that the principal amounts of equipment obligations and trustee's certificates are diminishing through periodical payments and so as clearly to provide (1) that if the reorganization is effected through the formation of a new corporation, such new corporation may be incorporated under the laws of such state or states as are most appropriate to the effective execution of the plan; (2) that the provision of section N of the plan for assumption by the reorganized company of contracts of the trustee or contracts of the debtor not disaffirmed by the trustee, be limited in its effect, in so far as contracts of the debtor are concerned, to executory contracts not disaffirmed by the trustee; (3) that so long as the Reconstruction Finance Corporation owns any new prior-lien bonds, series A, it be obligated to sell them at par plus accrued interest to the reorganized company for deposit in the latter's sinking fund as well as for retirement; (4) for the immediate issue of 383,862½ shares of the new preferred stock, authorization of which in the capital structure of the new company, is contemplated in the plan; (5) that during the first 10 years following the effective date of the plan the income available for sinking fund appropriations shall be applied one-half to the fund for new prior-lien bonds, series A, and for bonds issued to refund new prior-lien bonds, series A, and one-half to the fund for income bonds, and that thereafter it shall be applied first to the fund for the new prior-lien bonds, series A, and for bonds issued to refund new prior-lien bonds, series A, and then to the fund for income bonds; and (6) that appropriations out of income for the additions and betterments fund and the sinking fund shall be reduced to the extent of charges that may be made for depreciation of road.

The commission's report said that the modifications "represent changes that are within the spirit of the plan of reorgani-

zation as adopted by us, and, except for minor changes in wording, the modified provisions submitted by the petitioner are approved."

CHICAGO, ROCK ISLAND & PACIFIC.—*Lease of the C. R. I. & G.*—Division 4 of the Interstate Commerce Commission has set March 1 as the date for argument before the full commission in the case of the application of this company to lease the Chicago, Rock Island & Gulf.

ERIE.—*Reorganization.*—The Cleveland & Mahoning Valley has been authorized by Division 4 of the Interstate Commerce Commission to intervene in the reorganization proceedings of this company under section 77 of the Bankruptcy Act.

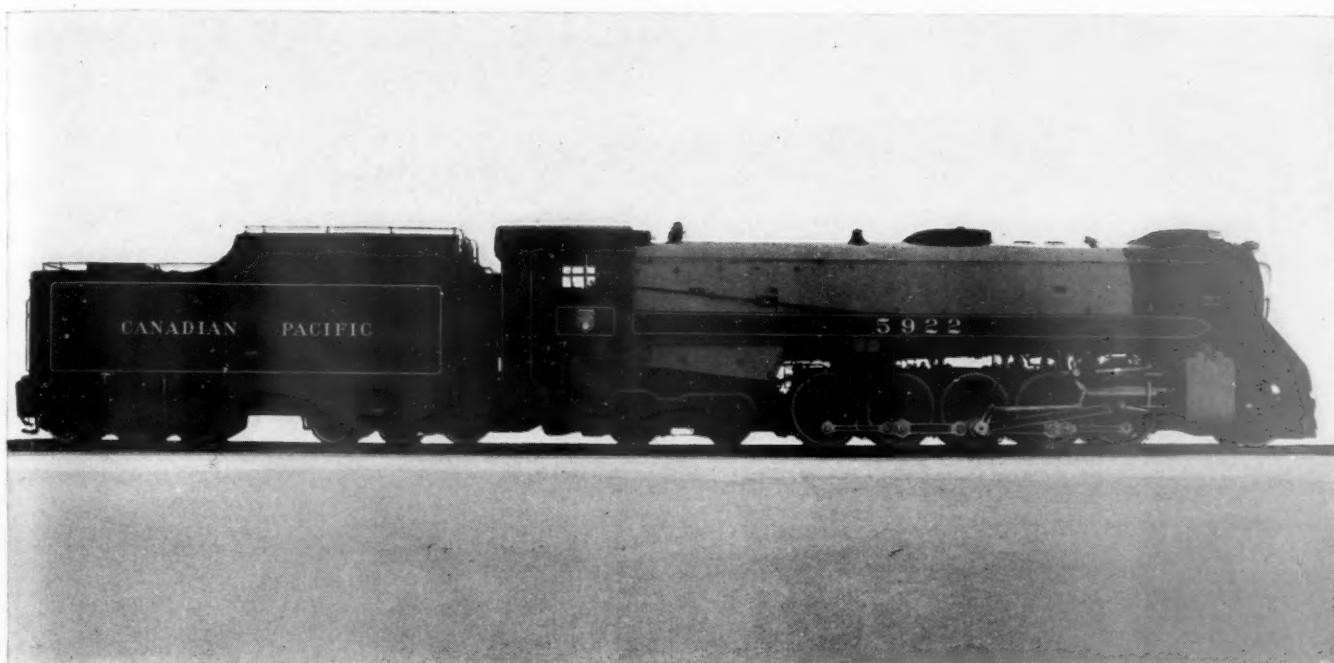
ERIE.—*Subsidiary Seeks Separate Reorganization.*—The Northern of New Jersey, a short suburban road on which the Erie is seeking to disaffirm its lease, has received approval of its petition to reorganize separately under the provisions of Chapter 10 of the Federal Bankruptcy Act from Judge Guy L. Fake, of the federal district court for New Jersey. Conover English of Newark, N. J., and Irving S. Reeves of Englewood, were appointed trustees and were directed to submit a tentative plan of reorganization not later than March 20.

Stockholders of the road recently elected an entirely new board of directors and officers to replace personnel composed principally of officers of the Erie. The company is reorganizing under the provisions of Chapter 10 of the Federal Bankruptcy Act, rather than Section 77 because at present it is not an operating company and owns no rolling stock. Its assets consist largely of rights-of-way and franchise of the 26-mile line between North Bergen, N. J., and Nyack, N. Y., valued at \$2,580,492. Its liabilities have been set at something under \$1,000,000, including bond interest and maturities and between \$100,000 and \$120,000 in property and franchise taxes now in litigation.

KANSAS CITY SOUTHERN-LOUISIANA & ARKANSAS.—*Joint Operation.*—These companies have asked the Interstate Commerce Commission for a certificate of convenience and necessity authorizing each to operate under trackage rights over the other company's main line, yard, side, spur and other tracks, including the use of yards, shops, roundhouses and depots of the other company, and also the use by the Kansas City Southern of certain tracks of the St. Louis Southwestern and usage by the L. & A. of facilities of the Kansas City, Shreveport & Gulf Terminal, in Shreveport, La.

LOUISIANA & ARKANSAS.—*Merger of the L. A. & T.*—Division 4 of the Interstate Commerce Commission has set March 1 as the date for argument before the full commission in the case of the application of this company to acquire the Louisiana, Arkansas & Texas.

LOUISVILLE & NASHVILLE.—*Abandonment by the Tennessee Western.*—The Interstate Commerce Commission, Division 4, has authorized this company to abandon the operation and the Tennessee Western



TEN 2-10-4 type locomotives have been delivered recently to the Canadian Pacific. These locomotives will be used in fast freight and passenger service over the mountain divisions.

The design is the C. P. R. standard 2-10-4 type, modernized and streamlined to conform with their modern 4-4-4 type and 4-6-4 type, thereby continuing the same pleasing, striking appearance for all their new power built for main line service.

NEW POWER—NEW PROFITS

Weight on Drivers	309,900 pounds	Diameter of Drivers	63 inches
Weight of Engine	447,000 pounds	Boiler Pressure	285 pounds
Cylinders	25 x 32 inches	Tractive Power (with Booster)	88,900 pounds

MONTREAL LOCOMOTIVE WORKS, LIMITED
MONTREAL **CANADA**

to abandon its entire line extending generally northwest from Iron City, Tenn., to Collinwood, 16.6 miles.

MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE—WISCONSIN CENTRAL.—Operation and Abandonment.—The Interstate Commerce Commission, Division 4, has authorized the receiver of the Wisconsin Central to operate under trackage rights over the line of the Baltimore & Ohio Chicago Terminal, between Forest Park, and Central Avenue in Chicago, 3.5 miles, and to acquire operating rights under a lease over that line between Central Avenue and Grand Central Passenger Station in Chicago, 10.7 miles, together with the depot, coach yard, engine terminal, and side tracks, aggregating 20 miles, and to lease certain freight tracks of the Central Terminal, in Chicago, aggregating 5.8 miles. The commission has also authorized the Soo Line to abandon operation under lease over the tracks of the Central Terminal and under trackage rights over the lines of the Baltimore & Ohio Chicago Terminal, and to operate over all the lines heretofore mentioned as agents of the receiver of the Wisconsin Central. The commission also approved the lease of the properties of the Central Terminal by the receiver of the Wisconsin Central.

MISSOURI PACIFIC.—Abandonment.—The Interstate Commerce Commission, Division 4, has authorized the trustee to abandon two miles of the Creve Coeur branch in St. Louis County, Mo.

NEW ORLEANS, TEXAS & MEXICO.—Interest Payment.—The Federal District Court at St. Louis has authorized the trustee for the New Orleans, Texas and Mexico to pay \$1,141,675 interest on the first mortgage and income bonds of this road.

NEW YORK CENTRAL.—Bonds of the Toledo & Ohio Central.—The Interstate Commerce Commission, Division 4, has authorized the Toledo & Ohio Central to issue \$2,067,000 of refunding and improvement mortgage bonds, series A, to be delivered at par to the New York Central in reimbursement for a like amount of advances made by that company for capital purposes. At the same time Division 4 granted authority to the New York Central to assume liability as guarantor under a guaranty agreement dated June 1, 1935, for the payment of the principal and interest on the bonds, and as lessee under a lease dated January 1, 1922, and supplement thereto date June 30, 1938. The bonds will bear interest at the rate of $3\frac{3}{4}$ per cent annually and will mature on June 1, 1960.

NEW YORK, NEW HAVEN & HARTFORD.—Abandonment by the Old Colony.—The Interstate Commerce Commission, Division 4, has authorized the trustees of the New York, New Haven & Hartford to abandon the operation and the trustees of the Old Colony to abandon the line extending from Greenbush Station, Mass., to Kingston Station, 14.2 miles. The permission is granted with the condition that within 60 days from the date of the certificate, the trustees shall sell all or any part of the segment involved to any person, firm, or corporation offering to purchase the segment for continued

operation and willing to pay not less than the fair net salvage value thereof.

NORTHEAST OKLAHOMA.—Acquisition.—This company has asked the Interstate Commerce Commission for authority to acquire and operate certain lines and properties of the Southwest Missouri, extending from Baxter Springs, Kans., to Picher, Okla., 5.6 miles of main line and 4.2 miles of spurs and sidings, a total of 9.8 miles.

RAILWAY EXPRESS AGENCY.—Purchase of Operating Rights and Property.—The Interstate Commerce Commission, Division 5, has authorized this company to purchase the property and operating rights of the Southeastern Express on some 18 routes in Georgia, Alabama, Illinois, North Carolina, and Indiana.

SEABOARD AIR LINE.—Abandonment.—The receivers have asked the Interstate Commerce Commission for authority to abandon a line extending from Adamsboro Junction, N. C., to Adamsboro, 1.9 miles.

SMOKY MOUNTAIN.—RFC Loan Denied.—The Interstate Commerce Commission, Division 4, has denied its approval of a Reconstruction Finance Corporation loan to this company in the amount of \$40,000. The commission found that the security offered and the prospective earning power were not sufficient to guarantee the loan.

SOUTHERN.—Abandonment.—This company has asked the Interstate Commerce Commission for authority to abandon its Rockport branch, extending from Rockport Junction, Ind., to Rockport, 16 miles.

SOUTHERN.—Abandonment.—Examiner R. Romero of the Interstate Commerce Commission, in a proposed report to the commission, has recommended that it authorize this company to abandon a branch line extending from a connection with its Columbia-Greenville line at Hodges, S. C., to Abbeville, 11.6 miles.

SOUTHERN PACIFIC.—Acquisition by the Pacific Electric.—The Pacific Electric, a subsidiary of the Southern Pacific, has asked the Interstate Commerce Commission for authority to acquire and dispose of the assets of the Motor Transit Company.

TEXAS MEXICAN.—Dismissal of RFC Loan Application.—At the request of the applicant, Division 4 of the Interstate Commerce Commission has dismissed the application of this company for approval of a Reconstruction Finance Corporation loan of \$200,000.

Average Prices of Stocks and Bonds

	Jan. 31	Last week	Last year
Average price of 20 representative railway stocks..	29.58	29.46	29.15
Average price of 20 representative railway bonds..	60.63	60.79	62.42

Dividends Declared

Cleveland & Pittsburgh.—Guaranteed, $87\frac{1}{2}$ c, quarterly, payable March 1 to holders of record February 10.
 Norfolk & Western.—\$2.50, quarterly, payable March 18 to holders of record February 28.
 Pittsburgh, Youngstown & Ashtabula.—7 Per Cent Preferred, \$1.75, quarterly, payable March 1 to holders of record February 20.
 Reading.—First Preferred, 50c, quarterly, payable March 9 to holders of record February 16.

Railway Officers

EXECUTIVE

Frederick J. Clark, whose election to vice-president in charge of transportation, purchasing and traffic of the Mexico North-Western, with headquarters at Ciudad Juarez, Mex., was announced in the *Railway Age* of January 21, was born



Frederick J. Clark

at Wild Horse, Tex., on July 5, 1885, and attended Baylor University in 1904 and 1905. He entered railway service on May 1, 1906, as a freight checker at Ciudad Juarez, for the Rio Grande Sierra Madre & Pacific (now Mexico North-Western), and on July 1, 1909, he was appointed a clerk in the auditors office, later assuming also the duties of traveling auditor. Two years later he was appointed purchasing clerk in the general manager's office and on May 1, 1912, he was promoted to chief clerk to the general manager. One year later he was advanced to superintendent of transportation of the Chihuahua division and on December 30, 1916, he was appointed general freight and passenger agent. Mr. Clark was promoted to acting general manager on November 1, 1925, and on January 1, 1936, he was appointed general manager, the position he held at the time of his recent promotion.

James Wiley King, general superintendent transportation of the Chesapeake & Ohio, with headquarters at Richmond, Va., has been elected vice-president in charge of operations and maintenance of the Association of American Railroads, with headquarters at Washington, D. C., succeeding **J. M. Symes**, whose appointment as general manager of the Western region of the Pennsylvania at Chicago is noted elsewhere in these columns. Mr. King was born on February 13, 1890, in Sussex county, Va., and learned telegraphy in the local telegraph office of the Atlantic Coast Line while attending school. After completing school in Sussex county, Mr. King attended Smithdeal Business College, Richmond. He entered the service of the Chesapeake & Ohio at Richmond as clerk in the Fulton shops in 1906, and three

months later became secretary to the superintendent of the Atlantic Coast Line at Richmond. In the summer of 1907 he returned to the Chesapeake & Ohio as a clerk in the Richmond office of the general passenger agent, and on September 1, 1907, Mr. King became secretary to the superintendent of transportation of the Atlantic Coast Line at Rocky Mount, N. C. He remained in this position until December 31, 1908, and on January 20, 1909, re-entered the service of the Chesapeake & Ohio as secretary to the general agent, transportation department. After a few months in this position Mr. King was delegated to organize and put in operation a Salvage department for the handling and sale of goods damaged in transit and on May 1, 1910, he was appointed chief clerk of the somewhat similar department of Personal Injury, Fire and Stock Claims, of which he was in charge. On November 1, 1916, he was appointed chief special agent and on August 1, 1922, became freight claim agent. He served as a member of the Executive Committee, Freight Claim division, American Railway Association and as chairman of an Arbitration Committee, and he was chairman of the Chicago, Virginia and Southeastern Claim Conferences, respectively. Mr. King was appointed general superintendent of transportation on April 18, 1933, the position



J. W. King

he held until his recent election to the A. A. R. In 1934 Mr. King was appointed by the Co-ordinator of Transportation to membership on the Committee on Freight Car Pooling. He is a past president of the Richmond Traffic Club.

FINANCIAL, LEGAL AND ACCOUNTING

Guernsey Orcutt, general attorney for the Western region of the Pennsylvania, with headquarters at Chicago, has been promoted to general attorney for the system, with headquarters at Philadelphia, Pa., and **Theodore Schmidt**, assistant general counsel of the Pennsylvania with headquarters at Chicago, has been promoted to general attorney with the same headquarters, succeeding Mr. Orcutt.

Frederick H. Meeder, assistant comptroller of the New York Central system, with headquarters at New York, retired on

January 31, after almost 53 years of service with the New York Central and allied companies. Mr. Meeder began his service in May, 1886, in the treasurer's office of the Michigan Central at New York. Four



Frederick H. Meeder

years later he entered the service of the New York Central & Hudson River, now the New York Central, and served in various capacities until February 1, 1910, when he was appointed assistant to the vice-president, accounting department. During the period of federal control he was supervisor of records in the corporate chief engineer's office. When the railroads were returned by the government on March 1, 1920, he was appointed assistant comptroller, the position he held until his retirement.

OPERATING

Kepler Johnson, superintendent of the Chicago, Rock Island & Pacific with headquarters at Fairbury, Nebr., has been appointed superintendent of the Rock Island-Frisco Terminal in St. Louis to succeed H. J. Sewell, deceased, and has been succeeded by **Francis Nugent**, trainmaster at Fairbury.

H. A. Offerman, general yardmaster at Grand Central Terminal, New York, has been appointed trainmaster, Grand Central Terminal and Electric division of the New York Central, succeeding **C. K. Brodhead**, who has been appointed trainmaster, Grand Central Terminal, Electric, Harlem and Putnam divisions, succeeding **C. W. Foshay**, retired.

J. L. Webb, superintendent of stations and transfers of the Eastern region of the Pennsylvania, has been appointed acting general superintendent of stations and transfers at Philadelphia, succeeding **R. K. Stackhouse**, who has been granted a leave of absence. **Earl L. Morrison**, freight agent at Baltimore, has been appointed superintendent of stations and transfers, Eastern region, at Philadelphia, succeeding Mr. Webb.

W. J. Atkinson, whose retirement as superintendent of the Cochrane division of the Canadian National, at Cochrane, Ont., was noted in the *Railway Age* of January

21, was born at Levis, Que., on February 14, 1880. He started his railway career in October, 1896, as messenger for the Grand Trunk at Levis. After being night agent at Chaudiere Junction, he became brakeman in 1898 and was successively fireman, engineman, conductor, and engineer. In 1916 he was appointed assistant superintendent at Edmundston, N. B., and two years later became superintendent there. Mr. Atkinson was appointed superintendent of the Levis division in 1931 and in 1936 was transferred to the Cochrane division, in the same capacity, where he remained until his retirement.

Archibald M. Crawford, whose promotion to superintendent of telegraph and signals of the Central region of the Pennsylvania, with headquarters at Pittsburgh, Pa., was announced in the *Railway Age* of January 21, was born at Steubenville, Ohio in 1893, and entered railway service on December 9, 1912, as a laborer on the Pittsburgh division of the Pennsylvania. On March 17, 1915, he was promoted to assistant signal foreman and on September 1, 1917, he was advanced to signal foreman. He was in the service of the United States Army from February 11, 1918, until June 18, 1919, and on the latter date he returned to the Pennsylvania, resuming his duties as a signal fore-



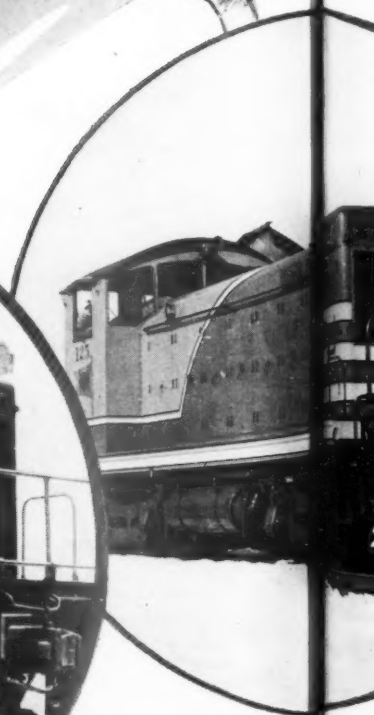
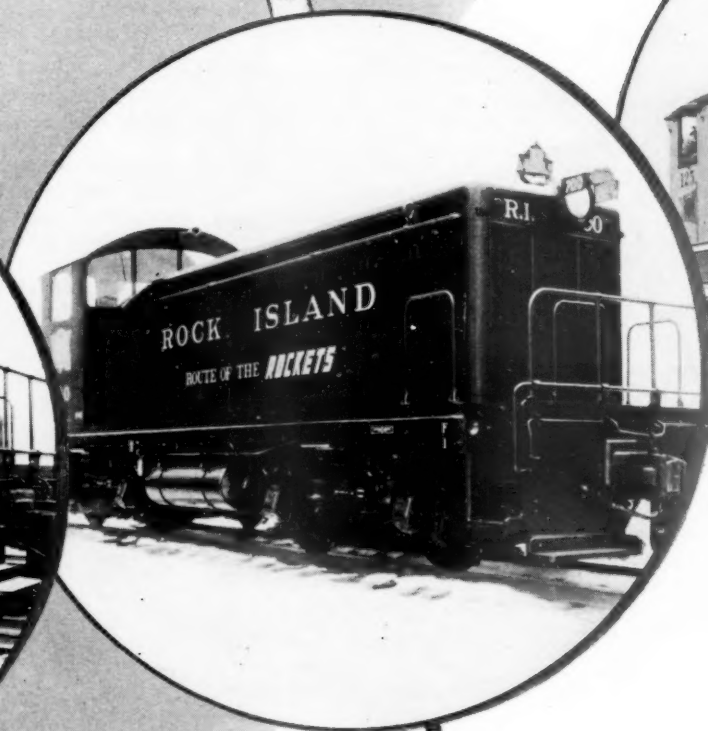
Archibald M. Crawford

man. On May 15, 1920, he was promoted to assistant supervisor of signals on the Pittsburgh Terminal division, and was transferred to the Pittsburgh division on April 1, 1921. Mr. Crawford was further advanced to supervisor of telegraph and signals on the Monongahela division on November 10, 1927, and was later transferred successively to the Ft. Wayne, Philadelphia, Panhandle and Philadelphia Terminal divisions. In May, 1937, he was promoted to assistant superintendent of telegraph and signals, Eastern Region, with headquarters at Philadelphia, the position he held at the time of his recent promotion.

John C. White, general manager of the Western region of the Pennsylvania, with headquarters at Chicago, has been transferred to the Central region at Pittsburgh, Pa., succeeding **C. I. Leiper**, whose appointment as chief engineer of the Central region with the same headquarters, is announced elsewhere in this issue. **James M.**

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EMC CORPORATION
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Symes, vice-president of the Association of American Railroads in charge of the operations and maintenance department, has



James M. Symes

been appointed general manager of the Western region replacing Mr. White.

Mr. Symes was born at Glen Osborne, Pa., near Pittsburgh, on July 8, 1895, and attended the Carnegie Institute of Technology. He began work with the Pennsylvania on May 1, 1916, in the office of the auditor of through freight traffic at Pittsburgh, transferring to the trainmaster's office of the Pittsburgh division later the same year. After serving in various capacities he was transferred to the general superintendent's office at Cleveland, Ohio, in May, 1920, and returned to Pittsburgh three years later as freight movement director in the office of the superintendent of freight transportation. Mr. Symes became chief clerk to the general manager at Chicago in May, 1927, and one year later was promoted to superintendent of passenger transportation of the Western region, with headquarters at Chicago. On December 1, 1929, he was transferred to the Eastern region, with headquarters at Philadelphia, Pa., and on September 16, 1934, he was promoted to chief of freight transportation of the system. Mr. Symes was granted a leave of absence on October 1, 1935, to become vice-president in charge of operations and maintenance of the Association of American Railroads at Washington, D. C.

TRAFFIC

Edward R. Jennings, district passenger agent of the Western Pacific, with headquarters at Salt Lake City, Utah, has been appointed special passenger representative, with headquarters in San Francisco, Cal., and has been succeeded by **George W. Crossen**, district passenger agent at Los Angeles, who in turn, has been succeeded by **James R. Cleland**, city passenger agent at San Francisco.

Charles R. James, passenger representative of the Pennsylvania with headquarters at Chicago, has been promoted to district passenger agent with headquarters at Dallas, Texas, to succeed **Reed W. Culmer**, deceased. **Christy G. Magruder**, chief clerk to the freight traffic manager

with headquarters at Chicago, has been promoted to district freight agent with headquarters in Milwaukee, Wis., to succeed **William H. Deitlaff**, retired.

Thomas Jefferson Jordan, whose appointment as general passenger agent of the Western Maryland at Baltimore, Md., was noted in the *Railway Age* of January 21, was born on July 3, 1883, in Anderson county, Kentucky. He entered railroad service in 1901 with the Louisville & Nashville in the general passenger department at Louisville, Ky., and served as ticket stock clerk and rate clerk until January 4, 1909, when he entered the service of the St. Louis Southwestern of Texas at Tyler, Texas, as chief rate clerk in the general passenger department. Mr. Jordan resigned on September 19, 1909, to enter the service of the International-Great Northern at Palestine, Texas, as chief rate clerk to the auditor of passenger traffic. On January 1, 1910, he entered the service of the Pennsylvania as rate clerk in the general passenger department at Philadelphia, Pa., later serving as rate and division clerk in the office of the auditor of passenger traffic.



T. J. Jordan

Mr. Jordan entered the service of the Western Maryland at Baltimore in July, 1922, as chief clerk and chief rate clerk in the passenger department and served in that capacity until 1930, at which time he was appointed freight representative in the division freight office at Baltimore. In 1937 Mr. Jordan was appointed commercial freight agent at Baltimore, the position he held until his recent appointment.

ENGINEERING AND SIGNALING

J. J. Desmond, division engineer of the Illinois Central with headquarters at Chicago, has been granted a leave of absence and **R. H. Carter**, assistant general yard master at Chicago, has been appointed acting division engineer.

H. J. Seyton, district engineer of Lines East on the Great Northern, with headquarters at Duluth, Minn., has been promoted to assistant chief engineer, Lines West, with headquarters at Seattle, Wash., succeeding **Colonel Frederick Mears**, whose death on January 11, was announced in the *Railway Age* of January 14. **E. E.**

Adams, district engineer, Lines West, with headquarters at Seattle, has been transferred to Duluth to succeed Mr. Seyton, and **F. E. Wiesner** has been appointed office engineer in the office of the assistant chief engineer at Seattle. The position of district engineer, Lines West, with headquarters at Seattle, has been abolished.

William F. Cummings, acting chief engineer of the Boston & Maine, the Maine Central and Portland Terminal, with headquarters at Boston, Mass., has been promoted to chief engineer of these companies, succeeding the late **Asa H. Morrill**. **Chauncy S. Robinson**, assistant chief engineer of these roads at Portland, Me., has been transferred in the same capacity to Boston. **Timothy G. Sughrue**, division engineer of the Terminal division of the Boston & Maine at Boston, has been promoted to engineer of maintenance of way of the Maine Central and Portland Terminal, with headquarters at Portland, assuming duties vacated by Mr. Robinson. **Joseph A. Parant**, principal assistant engineer of the Boston & Maine, has been promoted to assistant to the chief engineer of that road, at Boston. **Stanley G. Phillips**, assistant division engineer of the Terminal division of the Boston & Maine, has been promoted to division engineer of that division, succeeding Mr. Sughrue. **Harold W. Legro**, has been promoted to assistant division engineer of the Terminal division.

Frederick P. Sisson, whose promotion to chief engineer of the Grand Trunk Western, with headquarters at Detroit, Mich., was announced in the *Railway Age* of January 14, was born at Battle Creek, Mich., on January 16, 1880, and entered railway service on January 8, 1900, as a clerk in the engineering department of the Grand Trunk at Detroit. He advanced through successive positions as draftsman, surveyor, assistant engineer, resident engineer and division engineer at that point and on March 1, 1921, was appointed division engineer at Chicago, afterwards returning to Detroit in the same capacity. On April 16, 1929, Mr. Sisson was pro-



Frederick P. Sisson

moted to principal assistant engineer and on September 1, 1932 became office engineer, the position he held until his present promotion.



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W. B. Wood, chief engineer of the Central region of the Pennsylvania, with headquarters at Pittsburgh, Pa., has been transferred in the same capacity to the



Samuel R. Hursh

Eastern region, with headquarters at Philadelphia, Pa., succeeding **E. B. Temple**, who has been granted a leave of absence. **C. I. Leiper**, general manager of the Central region has been appointed chief engineer of that region relieving Mr. Wood. **W. F. Miller**, engineer, maintenance of way, Eastern Pennsylvania division, with headquarters at Harrisburg, Pa., has been appointed assistant to the chief engineer, maintenance of way, Eastern region, with headquarters at Philadelphia. **Samuel R. Hursh**, acting engineer maintenance of way at Harrisburg, has been appointed engineer, maintenance of way, Eastern Pennsylvania division. Mr. Hursh was born in Mifflinburg, Pa., in March, 1894, and following his graduation from Pennsylvania State College in 1916 he began work for the Pennsylvania and has been continuously in its service, except for a furlough for military service during the World War. Mr. Hursh served consecutively as chainman, rodman, assistant supervisor and supervisor on several divisions in the Eastern part of the system. He was appointed division engineer in the maintenance of way department in November, 1928, and thereafter served in that capacity on the Atlantic and Philadelphia terminal divisions and on the Pittsburgh division. Mr. Hursh was appointed superintendent of the Wilkes-Barre division at Sunbury, Pa., in October, 1934, and on April 1, 1935, was transferred in the same capacity to the Maryland division at Wilmington, Del., the position he held until July, 1938, when he became acting engineer maintenance of way of the Eastern Pennsylvania division, with headquarters at Harrisburg, Pa.

MECHANICAL

J. W. Bailey, superintendent of shops of the Canadian National, at Montreal, Que., has been appointed superintendent, motive power shop, with headquarters at Stratford, Ont., succeeding **W. C. Sealy**, who has been appointed superintendent of motive power and car shops, with head-

quarters at Montreal. The positions of superintendent, motive power shop, Montreal, and superintendent, car shop, Montreal, have been abolished. **G. McLennan**, superintendent of car shops, Montreal, has retired on pension. **W. G. Palmer**, freight car shop foreman, Montreal, has been appointed general foreman of the car shops, Montreal. **Winsby Walker**, foreman, has been appointed general foreman of motive power shops, Montreal.

Arthur H. Fiedler, road foreman of engines on the Northern Pacific, with headquarters at Livingston, Mont., has been promoted to master mechanic of the Fargo division, with headquarters at Jamestown, N. D., succeeding **L. J. Gallagher**, who has been transferred to Parkwater, Wash., replacing **E. S. Egbers**, who retired on February 1.

PURCHASES AND STORES

Thomas Britt, whose retirement as general fuel agent of the Canadian Pacific at Montreal, Que., was noted in the *Railway Age* of December 31, was born on February 3, 1871. In August, 1883, he entered the service of Carbray & Routh



Thomas Britt

of Montreal, ship brokers and St. Lawrence river agents for the General Mining Association of London, Eng. Mr. Britt joined the services of the Canadian Pacific as office boy in the stores department at Montreal on February 1, 1887, and was with the fuel department since 1892. He became accountant in 1895, chief clerk and accountant in 1896, acting general fuel agent in 1907, and general fuel agent in 1908.

L. L. King, assistant purchasing agent of the Illinois Central with headquarters at Chicago, has been promoted to purchasing agent with the same headquarters.

J. F. Daly, superintendent of ice plants of the Atchison, Topeka & Santa Fe with headquarters at Los Angeles, Calif., has been appointed manager of ice plants with the same headquarters, to succeed **F. A. Maginnis**, deceased, and has been succeeded by **Clive C. Berkley**, assistant superintendent of ice plants with headquarters at Los Angeles.

OBITUARY

William A. Fox, who resigned as vice president of the Chicago & Illinois Midland in 1937 died on January 25 at Glencoe, Ill.

Col. Jenks Buffum Jenkins, valuation engineer of the Baltimore & Ohio, with headquarters at Baltimore, Md., died on February 1 at his home in that city, at the age of 70.

Stanford T. Crapo, former general manager of the Pere Marquette at Detroit, Mich., died on January 26 at his home in Tryon, N. C., at the age of 73. Mr. Crapo was general manager of the Pere Marquette from January 1, 1900, to January 1, 1903, and served for a short time thereafter as general superintendent. He was a director of the road until last year.

L. A. David, assistant general manager of the Texas and Louisiana Lines of the Missouri Pacific with headquarters in Palestine, Tex., died in that city on January 11. Mr. David was born at Cameron, Mo., and entered railway service as a night operator on the Chicago, Rock Island & Pacific at Cameron Junction. In 1899, he became agent for the Denver & Rio Grande Western at Murray, Utah, and in the following year was promoted to dispatcher. In 1901, he was appointed chief dispatcher for the Chicago, Rock Island & Pacific at Trenton, Mo., and two years later was promoted to trainmaster of the Missouri division. In 1907, he entered the employ of the Missouri Pacific as a dispatcher at Osawatimie, Kan., and two years later became chief dispatcher at Pueblo, Colo. He was promoted to trainmaster on the Southern Kansas division with headquarters at Coffeyville, Kan., in 1910, which position he held until 1917 when he was promoted to superintendent at Omaha, Neb. He returned to Coffeyville as superintendent in 1918 and, in the following year was made superintendent at Falls City. He became superintendent at Little Rock, Ark., in 1920, superintendent of terminals at St. Louis, Mo., in 1924 and general superintendent of the old Eastern district in 1925. He was promoted to general superintendent



L. A. David

of the International Great Northern on June 1, 1936, and became assistant general manager of the Texas & Louisiana Lines of the Missouri Pacific on March 1, 1937.